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New York State Museum

JOHN M. CLARKE, Director

CHARLES H. PECK, State Botanist

1910

Museum Bulletin 150

REPORT OF THE STATE BOTANIST 1910

Dr John M. Clarke, Director of State Museum:

I have the honor to submit the following report of work done in the botanical section of the State Museum:

Since the date of my last report specimens of plants for the State herbarium have been collected in the counties of Albany, Chemung, Columbia, Essex, Greene, Livingston, Rensselaer, Saratoga, St Lawrence, Steuben, Ulster and Warren. There have been contributed specimens of plants that were collected in the counties of Albany, Cayuga, Cortland, Delaware, Essex, Franklin, Fulton, Greene, Genesee, Hamilton, Herkimer, Monroe, Nassau, Oneida, Onondaga, Ontario, Orleans, Oswego, Saratoga, Schoharie, St Lawrence, Suffolk, Tompkins, Warren, Washington, Wayne and Wyoming.

There have been received specimens of extralimital species of plants that were collected in Alabama, Colorado, Connecticut, District of Columbia, Florida, Indiana, Kansas, Kentucky, Maine, Massachusetts, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Brunswick, New Jersey, New Mexico, North Carolina, Nova Scotia, Ohio, Ontario, Pennsylvania, Texas, Utah, Washington and Wisconsin.

The number of species of which specimens have been added to the herbarium is 270. This includes contributed and collected specimens. Of this number, 79 species are new to the herbarium and 23 species are believed to be new to science. The new species are all fungi. A list of the added species is marked "Plants added to the herbarium."

The number of those who have contributed specimens is 176. This includes those who sent specimens merely for identification

if the specimens were collected in our State and were desirable additions to the herbarium. The number of identifications made of specimens sent or brought to the office by inquirers is 2419. The number of persons for whom identifications were made and the number of identifications made exceed the corresponding numbers, 152 and 1717, for last year. This indicates a gratifying increase in the general desire for botanical information. A list of the names of the contributors and their respective contributions is marked "Contributors and their contributions."

Names and notices of species new to our New York flora and descriptions of new species are given in a chapter marked "Species not before reported."

New localities of rare plants, descriptions of new varieties and any facts of interest that may have been observed are given in a chapter entitled "Remarks and observations."

Species of fungi collected outside our State limits are frequently sent for identification. Sometimes specimens are received that do not correspond to any published description. In such cases the fungus is given a name and a description of it prepared. These names and descriptions make a chapter with the heading "New species and varieties of extralimital fungi."

Specimens of five species of Crataegus, or thorn bushes, have been added to the large number already represented in the herbarium. Four of these have not before been reported and are new to our flora.

Specimens of five species of mushrooms have been collected and their edible qualities tried and approved. These make the whole number of our New York edible species and varieties 205. Three plates have been prepared on which the five added species are represented by colored figures, natural size. Descriptions of these species may be found in a chapter on "Edible fungi." Two other plates have been prepared on which three new species of mushrooms are represented.

One species has been tried which, when eaten freely, causes a profuse perspiration but no other inconvenience. Its flavor, texture, and digestibility are faultless, but its effects are such as to place it among medicinal, not edible, mushrooms. My attention was first called to this peculiar character of the mushroom by Mr F. G. Howland and through his kindness in furnishing me samples of it I have been able to verify its sudorific properties. Perhaps experimentation may prove it to be useful in cases of illness where a sudorfic medicine is desirable. An account of my experiment

may be found under the name Clitocybe dealbata sudorifica, in the chapter entitled "Remarks and observations."

Having been informed that the raspberry patches of the fruit growers in the vicinity of Marlboro, Ulster county, were suffering from disease and wishing to know the cause of it, a visit was made to that place in July. An examination of the diseased canes showed that they were suffering from an attack of a parasitic fungus whose botanical name is Sphaerella rubina Pk. The fruiting canes develop their leaves and flowers as usual but before the fruit ripens it withers and dries on the branches. The dryness of the season and an attack of "red spider" on the foliage were apparently contributing causes of the failure of the crop and the loss was severe. The diseased canes bore patches of the fungus. It matures its spores early in the season. In the type specimens they were found in May. The young canes showed brown or blackish patches one or two inches long on the lower part. In some cases they were near the ground, thereby indicating a probable infection while they were but a few inches tall. These spots had not yet developed their perithecia or spore cases but doubtless would toward the end of the season and next spring be ready to shed their spores and renew the species in the succeeding crop of young canes. Theoretically the disease should be prevented by spraying the young canes with a good fungicide like Bordeaux mixture or lime sulfur mixture, but it would be necessary to give the first spraying when the young shoots are only three or four inches high. This should be repeated once a week till the canes of the previous year begin to blossom.

While there, my attention was called to a diseased chestnut tree. It was a young tree with sickly looking foliage and a few dead branches. It was suffering from the chestnut bark disease caused by a parasitic bark fungus. Both branches and trunk were affected by the fungus, the latter but a few feet above the ground. It was my first opportunity to see a tree affected by this disease about which much that appears to me to be overdrawn and needlessly alarming has recently been published in magazines and newspapers. Remarks concerning its distribution in our State are given under the name Valsonectria parasitica (Murr.) Rehm in the chapter headed "Remarks and observations."

In 1899 a census of the flowering plants and ferns of Bonaparte swamp was taken and a list of the species was published in the report of the Botanist for that year. The swamp is a large one

lying in the northern part of Lewis county a short distance east of Lake Bonaparte. It is about two miles in diameter where the Carthage and Adirondack Railroad crosses it. The number of species of flowering plants and ferns found in it is 128.

The swamps and peat marshes of the State are a part of our natural resources. When cleared, drained, and properly cultivated they constitute some of our most valuable agricultural lands. Their gradual formation from a water surface to a land surface is interesting and due chiefly to the agency of plants. If the original pond or lake is very shallow its whole surface, except the central channel through which the stream flows, is occupied by aquatic plants. These by their annual growth and partial decay form a sedimentary deposit which gradually fills the lake until water-loving mosses, sphagnum, and other marsh plants take possession. When this has taken place we have a sphagnum marsh. If the lake is deep in the center the marsh forms only along the shallow margins. By the yearly growth and decay of the plants of the sphagnum marsh its surface gradually becomes firmer and small shrubs and herbs of wet places take possession. When the shrubs predominate it is called a shrubby marsh; when marsh grasses and sedges are the prevailing vegetation it is a grassy marsh. In due time the surface of the shrubby marsh becomes sufficiently firm to sustain and support certain kinds of trees whose roots do not object to an abundant and constant supply of moisture. When this stage has been reached we have a swamp, a low wet piece of woods covered with trees and tall shrubs. The border of a marsh may be and often is a wooded swamp which is itself merely an older part of the marsh. The grassy marsh appears to be less inviting to the advent of trees than the sphagnum marsh, and prairielike, it often remains open an indefinite time. Among the natural products of our marshes are the two species of cranberries, the large or common cranberry and the small cranberry, the mosses used by florists and nurserymen for packing material and the peat used as an absorbent or bedding in stables and ultimately in this way as a component of the stable manure. The more firm and fibrous peat from bushy marshes is used for various purposes requiring a fibrous material and for heating purposes. The grasses and sedges of the grassy marsh are sometimes cut for hay, but this is rarely done except in cases of scarcity or very high prices of hay of better quality. The sedges of certain species are sometimes utilized in making "crex carpets" and various articles of furniture.

That we may have a more definite knowledge of the species of plants that are most prevalent in our marshes, and consequently the most common agents in transforming our marshes into a more useful condition, a list of the flowering plants and ferns of two of our marshes has been made. This list, with a description of the marshes, will be found in a chapter entitled "Cranberry and Averyville marshes."

In accordance with the plan previously adopted, a revision of our species of Hypholoma and Psathyra has been made. The descriptions have been rewritten and the species arranged in the groups or sections in which they were distributed by Fries, and the usual "keys" prepared. The chapters containing these descriptions are respectively entitled "New York species of Hypholoma" and "New York species of Psathyra."

The coincidence between a plentiful crop of wild mushrooms and good crops of staple agricultural products has been noticed in previous reports. The past season has furnished a noticeable confirmation of the results of previous observations. While the usual summer drouth in the eastern and southeastern parts of the State was quite severe and wild mushrooms correspondingly scarce. in other parts of the State the rainfall has been more abundant and the crop of wild mushrooms has been plentiful. One correspondent writing from Silver Springs, Wyoming county, in speaking of one of his collecting excursions, says, "I am swamped with the number and variety of mushrooms now growing in the woods. It seems that I find a new kind at almost every step. I had a market basket full of specimens which comprised about fifty species." Another correspondent writing from Fourth lake, Herkimer county, says, "Mushroom hunting has been very delightful here this season. I have found so many fine specimens I could not keep pace with them."

The season has been specially favorable to the development of the giant puffball, Calvatia gigantea (Batsch). They have appeared in unusual numbers and, in some cases, of unusual size. A correspondent writing from Pittsford, Monroe county. says, "I am sending you a specimen of Calvatia gigantea weighing seven pounds. They are very plentiful here this season. I have seen thirty-five or more, one weighing twelve pounds." A single one of medium size, that is, eight to ten inches in diameter, is sufficient to afford a meal to a family of ordinary size. The same correspondent says "Puffballs are growing here by the hundred and we are enjoying them very much. Mushrooms in

this part of the country are very plentiful." The giant puffball usually grows in open places and but one or two in a place, but in New Lebanon, Columbia county, there is a station shaded by young deciduous trees where I saw about a dozen specimens growing in close proximity to each other.

Mr S. H. Burnham, my assistant, has continued the clerical work of the office, doing all the typewriting of labels, letters and reports, attending to the correspondence of the office during my absence on collecting trips, preparing, disinfecting, labeling and arranging the specimens in their proper places, and aiding in the identification of specimens. He has also aided in the investigation of the pine rust that has been proving injurious to young plantations of white pine.

Respectfully submitted

CHARLES H. PECK

State Botanist

Albany, December 28, 1910

PLANTS ADDED TO THE HERBARIUM

New to the herbarium

Amanita bisporigera *Atk.*
A. floccocephala *Atk.*
A. velatipes *Atk.*
Ascochyta menyanthis *Oud.*
Aulographum ledi *Pk.*
Biatora coarctata (*Sm.*) *Nyl.*
Calvatia craniiformis (*Schw.*)
Camelina sativa (*L.*) *Crantz*
Cercospora phlogina *Pk.*
Cladosporium paeoniae *Pass.*
Clinacium kindbergii (*R. & C.*)
Clitocybe biformis *Pk.*
C. maxima *G. & M.*
Cortinarius croceofolius *Pk.*
C. glaucopus (*Schaeff.*)
C. napus *Fr.*
C. triumphans *Fr.*
Crataegus aristata *S.*
C. brainerdi *S.*
C. calvini *S.*
C. longipedunculata *S.*
C. nemorosa *S.*
Crepis setosa *Hall. f.*
Cryptosporium macrospermum *Pk.*
Cycloloma atriplicifolium (*Spreng.*)
Cytospora microspora (*Cd.*) *Rabenh.*
Diplodia linderae *E. & E.*
Eccilia mordax *Atk.*
Eurotium subgriseum *Pk.*
Gloeosporium caryae *E. & D.*
G. divergens *Pk.*
Grindelia squarrosa (*Pursh*) *Dunal*
Helianthus petiolaris *Nutt.*
Heterothecium pezizoideum (*Ach.*)
Hygrophorus caprinus (*Scop.*) *Fr.*
Hypericum prolificum *L.*
Hypholoma delineatum *Pk.*
Hypochnus tristis *Karst.*
Inocybe rimosoides *Pk.*
Lactarius boughtoni *Pk.*
Lentinus piceinus *Pk.*
Lychnis coronaria (*L.*) *Desr.*
Machaeranthera pulverulenta (*Nutt.*)
Macrosporium heteronemum (*Desm.*)
Marasmius contrarius *Pk.*
Myxosporium carpini *Pk.*
Naemospora croceola *Sacc.*
Naucoria sororia *Pk.*
Oidium asteris-punicei *Pk.*
Oxybaphus floribundus *Chois.*
Pertusaria leioplaca (*Ach.*)
Pholiota terrigena *Fr.*
Phoma piceina *Pk.*
P. simillima *Pk.*
P. stictica *B. & Br.*
Phyllosticta betae *Oud.*
P. subtilis *Pk.*
Physcia hispida (*Schreb.*)
Picris hieracioides *L.*
Pilocratera abnormis *Pk.*
Placodium ferrug. discolor *Willey*
Plasmodiophora elaeagni *Schroet.*
Pleurotus approximans *Pk.*
Ramalina rigida (*Pers.*) *Tuck.*
Rhabdospora physostegiae *Pk.*
Scirpus occidentalis (*Wats.*) *Chase*
Sideranthus gracilis (*Nutt.*) *Rydb.*
Sphaeropsis smilacis latispora *Pk.*
Sporotrichum grisellum *Sacc.*
Theloschistes flavicans *Wallr.*
Thlaspi perfoliatum *L.*
Trichothecium subgriseum *Pk.*
Triosteum perfoliatum *L.*
Usnea trichodea *Ach.*
Vermicularia beneficiens *Pk.*
V. pomicola *Pk.*
Verticillium agaricinum (*Lk.*) *Cd.*
Viburnum venosum *Britton*
Vicia villosa *Roth*

Not new to the herbarium

Acalypha virginica *L.*
Agaricus abruptibulbus *Pk.*
A. arvensis *Schaeff.*
Alisma plantago-aquatica *L.*
Ambrosia artemisiifolia *L.*
Amelanchier oblongifolia (*T. & G.*)
Antennaria neglecta *Greene*
Apocynum cannabinum *L.*

Arabis laevigata (*Muhl.*) *Poir*
Arceuthobium pusillum *Pk.*
Aristolochia clematitis *L.*
Artemisia biennis *Willd.*
Asclepias syriaca *L.*
Aspidium thelypteris (*L.*) *Sw.*
Aster laevis *L.*
A. schreberi *Nees*
A. undulatus *L.*
Astragalus neglecta (*T. & G.*) *Sheld.*
Barbarea stricta *Andrz.*
Boletinus paluster *Pk.*
Boletus clintonianus *Pk.*
B. elbensis *Pk.*
B. parasiticus *Bull.*
Brassica arvensis (*L.*) *Ktze.*
Broussonetia papyrifera (*L.*)
Calvatia gigantea (*Batsch*)
Calyptospora goeppertiana *Kuehn*
Camelina microcarpa *Andrz.*
Cantharellus infundibuliformis (*Scop.*)
Cardamine parviflora *L.*
Carex canescens *L.*
C. longirostris *Torr.*
Centaurium umbellatum *Gilib.*
Cerastium viscosum *L.*
Ceratiomyxa fruticulosa (*Muell.*)
Cladosporium carpophilum *Thuem.*
Cinna arundinacea *L.*
C. latifolia (*Trev.*) *Griseb.*
Collybia butyracea (*Bull.*) *Fr.*
Cornus canadensis *L.*
Coronilla varia *L.*
Cortinarius sanguineus *Fr.*
Crataegus apposita *S.*
C. colorata *S.*
C. dissociabilis *S.*
C. dissona *S.*
C. foetida *Ashe*
C. grayana *Eggle.*
C. inopinata *S.*
C. inusitula *S.*
C. leiophylla *S.*
C. pellecta *S.*
C. punctata *Jacq.*
C. recta *S.*
C. spatifolia *S.*
C. succulenta *Lk.*
C. tenuiloba *S.*
Cryptotaenia canadensis (*L.*)
Cynoglossum officinale *L.*
Cynosurus cristatus *L.*
Cyperus grayi *Torr.*
Daphne mezereum L.
Daucus carota *L.*
Desmodium canescens (*L.*) *DC.*
Epilobium hirsutum *L.*
Erechtites hieracifolia (*L.*) *Raf.*
Eriophorum callitrix *Cham.*
E. virginicum *L.*
Erysiphe polygoni *DC.*
Eupatorium hyssopifolium *L.*
E. purpureum *L.*
Euphorbia corollata *L.*
E. peplus *L.*
Fusicladium dendriticum (*Wallr.*)
Galium aparine *L.*
G. palustre *L.*
Gentiana quinquefolia *L.*
Gerardia maritima *Raf.*
G. purpurea *L.*
G. virginica (*L.*) *BSP.*
Gnaphalium uliginosum *L.*
Habenaria dilatata (*Pursh*) *Gray*
Hedeoma hispida *Pursh*
Helvella crispa (*Scop.*) *Fr.*
H. gracilis *Pk.*
Herpotrichia diffusa (*Fckl.*)
Hieracium canadense *Mx.*
H. murorum *L.*
Hordeum jubatum *L.*
H. trifurcatum *Jacq.*
Hydrastis canadensis *L.*
Hygrophorus eburneus (*Bull.*) *Fr.*
Hypholoma appendiculatum (*Bull.*)
Hex verticillata (*L.*) *Gray*
Ilex verticillata (*L.*) *Gray*
Juncus bufonius *L.*
Kalmia polifolia *Wang.*
Lechea racemulosa *Mx.*
Lenzites sepiaria *Fr.*
Leontodon nudicaulis (*L.*) *Banks*
Lepidium campestre (*L.*) *R. Br.*
L. draba *L.*
Lepiota procera (*Scop.*) *Fr.*
L. rubrotincta *Pk.*
Liatris scariosa *Willd.*
Lithospermum arvense *L.*
L. officinale *L.*
Lotus corniculatus *L.*
Luzula spicata (*L.*) *DC.*

Lycoperdon atropurpureum *Vitt.*
Massariella scoriadea (*Fr.*) *Sacc.*
Melissa officinalis *L.*
Mitrula cucullata *Fr.*
Monarda fistulosa *L.*
Monilia crataegi *Diedicke*
Mycogone cerv. subincarnata *Pk.*
Myrica asplenifolia *L.*
Oidium destruens *Pk.*
Onosmodium hispidissimum *Mack.*
Osmorhiza slaytoni (*Mx.*) *Clarke*
Osmunda cinnamomea *L.*
Panax quinquefolium *L.*
Panicum agrostoides *Spreng.*
P. amarum *Ell.*
P. boreale *Nash*
P. scribnerianum *Nash*
P. spretum *Schultes*
Paspalum circulare *Nash*
P. muhlenbergii *Nash*
P. setaceum *Mx.*
Phyllosticta podophylli (*Curt.*)
Picea mariana (*Mill.*) *BSP.*
Plantago elongata *Pursh*
P. media *L.*
Polygonum prolificum (*Small*)
Polypodium vulgare *L.*
Polyporus circinatus *Fr.*
P. frondosus *Fr.*
P. pubescens (*Schum.*) *Fr.*
Potamogeton americanus *C. & S.*
Prunus cuneata *Raf.*
P. pennsylvanicus *L. f.*
Puccinia rubigo-vera (*DC.*) *Wint.*
Ribes prostratum *L'Her.*
Roestelia aurantiaca *Pk.*
Rudbeckia laciniata *L.*
Rumex hastatulus *Baldw.*
Russula brevipes *Pk.*
Sabatia stellaris *Pursh*
Sagina decumbens (*Ell.*) *T. & G.*
Salix petiolaris *Sm.*
S. purpurea *L.*
S. rostrata *Richards.*
S. tristis *Ait.*
Scirpus olneyi *Gray*
Sedum purpureum *Tausch*
Septoria violae *West.*
Serapias helleborine *L.*
Setaria verticillata (*L.*) *Bv.*
Solidago neglecta *T. & G.*
Sparganium minimum *Fr.*
Spartina patens juncea (*Mx.*)
Spergularia marina (*L.*)
Sphaeronema acerinum *Pk.*
Sphaerotheca humuli (*DC.*)
Sphenopholis pallens (*Spreng.*)
Spirea latifolia *Borkh.*
Sporobolus cryptandrus (*Torr.*)
Steironema ciliatum (*L.*) *Raf.*
Stipa avenacea *L.*
Teucrium canadense *L.*
T. occidentale *Gray*
Thaspium barbinode (*Mx.*) *Nutt.*
Thymus serpyllum *L.*
Tilia michauxii *Nutt.*
Tricholoma vaccinum (*Pers.*) *Fr.*
Trichostemma dichotomum *L.*
Tridens flavus (*L.*) *Hitchc.*
Urtica lyalli *Wats.*
Ustilago longissima (*Sow.*)
U. zeae (*Beckm.*) *Ung.*
Vaccinium atrococcum (*Gray*)
V. macrocarpon *Ait.*
V. oxycoccos *L.*
Valsonectria parasitica (*Murr.*)
Veronica anagallis-aquatica *L.*
Viburnum dentatum *L.*
V. pauciflorum *Raf.*
Vicia americana *Muhl.*
V. angustifolia (*L.*) *Reich.*
Viola Blanda *Willd.*
Viola pallens *(Banks) Brain.*

CONTRIBUTORS AND THEIR CONTRIBUTIONS

Miss L. C. Allen, Newtonville, Mass.

Lentinus spretus *Pk.*
Lepiota allenae *Pk.*

Miss H. C. Anderson, Lambertville, N. J.

Boletus albus *Pk.*
Psathyrella graciloides *Pk.*

Miss F. Beckwith, Rochester

Aster laevis *L.*
Helianthus petiolaris *Nutt.*
Leontodon nudicaulis (*L.*) *Banks*
Lotus corniculatus *L.*
Machaeranthera pulverulenta (*Nutt.*)
Sideranthus gracilis (*Nutt.*) *Rydb.*

Mrs E. B. Blackford, Boston, Mass.

Clavaria pulchra *Pk.*
Flammula graveolens *Pk.*
Hebeloma mesophaeum *Fr.*
Naucoria myosotis *Fr.*

Miss E. S. Blunt, Elizabethtown

Ambrosia artemisiifolia *L.*

Miss G. S. Burlingham, New York

Lactarius glyciosmus *Fr.*

Miss M. C. Burns, Middleville

Lepiota procera (Scop.) *Fr.*

Mrs C. F. Davis, Portland, Me.

Peziza aurantia *Pers.*

Mrs E. P. Gardner, Canandaigua

Astragalus neglectus (*T. & G.*)
Cryptataenia canadensis (*L.*) *DC.*
Lychnis coronaria (*L.*) *Desr.*
Melissa officinalis *L.*
Monarda fistulosa *L.*
Steironema ciliatum (*L.*) *Raf.*
Teucrium occidentale *Gray*

Mrs L. L. Goodrich, Syracuse

Centaureum umbellatum *Gilib.*
Daphne mezereum *L.*
Lepidium draba *L.*

Miss A. Hibbard, West Roxbury, Mass.

Entoloma cyaneum *Pk.*
Lactarius colorascens *Pk.*
Naucoria myosotis *Fr.*
Pholiota duroides *Pk.*
Russula bresadolae *Schulz*

Mrs S. Manning, St Paul, Minn.

Flammula flavida *Pers.*

Miss E. W. Mische, Syracuse

Daphne mezereum *L.*

Mrs C. E. Putnam, St Paul, Minn.

Flammula flavida *Pers.*

Mrs S. W. Russell, Glens Falls

Polypodium vulgare *L.*

Mrs F. C. Sherman, Syracuse

Clitocybe maxima *G. & M.* Stropharia depilata *Pers.*

Miss A. Van Horne, Montreal, Can.

Cantharellus brevipes *Pk.*

Miss E. C. Webster, Canandaigua

Crataegus calvini *S.*
C. gemmosa *S.*
C. longipedunculata *S.*
Cynosurus cristatus *L.*
Hieracium murorum *L.*
Plantago media *L.*
Puccinia rubigo-vera (*DC.*) *Wint.*
Scirpus occidentalis (*Wats.*)
Serapias helleborine *L.*
Setaria verticillata (*L.*) *Bv.*
Vicia americana *Muhl.*

Miss H. Whalen, Ballston Spa

Agaricus campester hortensis *Cke.*

Mrs M. E. Whetstone, Minneapolis, Minn.

Flammula pulchrifolia *Pk.*
Lentinus tigrinus (*Bull*) *Fr.*
Lepiota rubrotincta *Pk.*
Mycogone cerv. subincarnata *Pk.*
Psathyrella caudata *Fr.*
Tubaria inquilina *Fr.*
Volvaria peckii *Atk.*
V. speciosa *Fr.*

F. H. Ames, Brooklyn

Amanita radicata *Pk.*
Boletus vermiculosus *Pk.*
Lactarius torminosus *Fr.*
Usnea trichodea *Ach.*

G. F. Atkinson, Ithaca

Amanita bisporigera *Atk.*
A. floccocephala *Atk.*
A. velatipes *Atk.*
Bubakia crotonis (*Cke.*) *Arth.*
Collybia familia *Pk.*
Craterellus cornucopioides (*L.*)
Eccilia mordax *Atk.*
Eocronartium typhuloides *Atk.*
Hygrophorus caprinus (*Scop.*) *Fr.*
H. chrysodon (*Batsch*)
H. luridus *B. & C.*
Hypholoma boughtoni *Pk.*
Kuehneola albida (*Kuehn*) *Magn.*
Lactarius camphoratus (*Bull.*)
Naucoria sororia *Pk.*
Panaeolus papilionaceus *Fr.*
Pholiota terrigena *Fr.*
Plasmopara halstedii (*Farl.*)
Polyporus caeruleoporus *Pk.*
Russula crustosa *Pk.*
Sporotrichum grisellum *Sacc.*
Uromyces appendiculatus (*Pers.*)

G. G. Atwood, Albany

Cryptosporium macrospermum *Pk.* Roestelia aurantiaca *Pk.*

Sphaerotheca humuli (*DC.*) *Burr.*

H. J. Banker, Greencastle, Ind.

Hydnum combinans *Pk.*
H. farinaceum *Pers.*
Hydum populinum *Pk.*
Irpex ambiguus *Pk.*

E. Bartholomew, Stockton, Kan.

Basidiophora kellermanii (*E. & H.*)
B. kell. paupercula *Pk.*
Bertia querceti *Rehm*
Bispora effusa *Pk.*
Cercospora clavata (*Ger.*) *Pk.*
C. verbenae-strictae *Pk.*
Coniosporium arundinis (*Cd.*) *Sacc.*
C. perplexum *Pk.*
Crucibulum vulgare *Tul.*
Cyathus striatus schweinitzii *Tul.*
Cylindrosporium conservans *Pk.*
C. padi cerasina *Pk.*
Daedalea unicolor (*Bull.*) *Fr.*
Dasyscypha bicolor (*Bull.*) *Fckl.*
Diaporthe alnea *Fckl.*
D. callicarpae *Pk.*
Diatrype bullata (*Hoffm.*) *Fr.*
Diplodia alni-rubrae *Pk.*
Eutypella ailanthi *Sacc.*
E. stellulata (*Fr.*) *Sacc.*
Helminthosoporium macrocarpum *Grev.*
H. subapiculatum *Pk.*
Hormiscium ambrosiae *Pk.*
Hymenochaete rubiginosa (*Schrad.*)
H. tabacina (*Sow.*) *Lev.*
Hypochnus sambuci (*Pers.*) *Fr.*
Hypoxylon bartholomaei *Pk.*
Hypoxylon fuscum (*Pers.*) *Fr.*
Leptosphaeria sambuci *Fautr.*
Leptothyrium punctiforme *B. & C.*
Macrosporium sarcinula *Berk.*
Melanconis anomala *Pk.*
Melanconium bicolor candidum *Pk.*
Melanomma pulvis-pyrius (*Pers.*)
Merulius corium *Fr.*
Microdiplodia viciae *Pk.*
Microsphaera alni (*Wallr.*) *Salm.*
Ovularia rigidula *De'ac.*
O. stachydis-ciliatae *Pk.*
Phleospora mori (*Lev.*) *Sacc.*
Phyllosticta paupercula *Pk.*
Polystictus abietinus *Fr.*
Ramularia virgaurea *Thuem.*
Septoria aceris-macrophylli *Pk.*
S. ficarioides *Pk.*
S. samarae *Pk.*
Sphaerella gaultheriae *C. & P.*
S. rumicis (*Desm.*) *Cke.*
Sphaeromyces delphinii *Pk.*
Sphaeropsis melanconioides *Pk.*
Trimmatostroma americana *Thuem.*
Uredo quercus *Broud.*
Valsa minutella *Pk.*
V. salicina tetraspora (*Curr.*)
Valsella salicis *Fckl.*

M. S. Baxter, Rochester

Cinna arundinacea *L.*
Epilobium hirsutum *L.*
Euphorbia corollata *L.*
Helianthus petiolaris *Nutt.*
Hieracium canadense *Mx.*
Onosmodium hispidissimum *Mack.*
Panicum boreale *Nash.*
P. scribnerianum *Nash*
Panicum spretum *Schultes*
Paspalum muhlenbergii *Nash*
Rynchospora alba (*L.*) *Vahl*
Sideranthus gracilis (*Nutt.*) *Rydb.*
Solidago neglecta *T. & G.*
Sphenopholis pallens (*Spreng.*)
Tilia michauxii *Nutt.*
Tridens flavus (*L.*) *Hitchc.*

C. E. Bessey, Lincoln, Neb.

Pholiota squarrosa *Muell.*

E. Bethel, Denver, Colo.

Allantonectria yuccae *Earle*
Pholiota comosa *Fr.*
Peridermium harknessiana *Moore*
Septoria samarae *Pk.*

E. F. Bigelow, Sound Beach, Conn.

Calostoma cinnabarinum *Desv.*

E. S. Black, Little Silver, N. J.

Broussonetia papyrifera (*L.*) *Vent.*

F. S. Boughton, Pittsford

Agaricus silvaticus *Schaeff.*
Boletus albus *Pk.*
Calvatia gigantea (*Batsch*)
Cortinarius napus *Fr.*
Inocybe modesta *Pk.*
Lactarius boughtoni *Pk.*
Lepiota rugoso-reticulata *Lorin.*
Thelephora willeyi *Clinton*
Verticillium agaricinum *(Lk.) Cd.*

E. L. Bradley, Cato

Hydrastis canadensis *L.*

F. J. Braendle, Washington, D. C.

Clitopilus washingtoniensis *Braend.*

S. H. Burnham, Hudson Falls

Acalpha virginica *L.*
Ascochyta menyanthis *Oud.*
Aster undulatus loriformis *Burg.*
Biatora coarctata (*Sm.*) *Nyl.*
Boletus felleus *Bull.*
Clitocybe candida *Bres.*
Clitopilus caespitosus *Pk.*
Collybia zonata *Pk.*
Cortinarius aureifolius *Pk.*
Cronartium ribicola *F. de W.*
Cycloloma atriplicifolium (*Spreng.*)
Desmodium canescens (*L.*) *DC.*
Diplodia linderae *E. & E.*
Eupatorium purpureum *L.*
Hedeoma hispida *Pursh*
Heterothecium pezizoideum (*Ach.*)
Hordeum jubatum *L.*
Hygrophorus minutulus *Pk.*
Hypoxylon morsei *B. & C.*
Lepiota clypeolaria (*Bull.*) *Fr.*
L. rubrotincta *Pk.*
Massariella scoriadea (*Fr.*) *Sacc.*
Oxybaphus floribundus *Chois.*
Pertusaria leioplaca (*Ach.*)
Placodium cerin. sideritis *Tuck.*
Pleurotus atropellitus *Pk.*
P. ulmarius Fr
Psilocybe camptopoda *Pk.*
Puccinia hieracii (*Schum.*) *Mart.*
Sedum purpureum *Tausch*
Septoria sedicola *Pk.*
S. violae *West.*
Tricholoma terreum *Schaeff.*
Triosteum perfoliatum *L.*
Veronica anagallis-aquatica *L.*

H. P. Burt, New Bedford, Mass.

Collybia maculata (*A. & S.*) *Fr.*
Stropharia semiglobata *Batsch*

G. H. Chadwick, Canton

Vicia villosa *Roth*

S. Davis, Boston, Mass.

Boletus chrysen. sphagnorum *Pk.*
Clavaria fusiformis *Sow.*
C. grandis *Pk.*
C. pallescens *Pk.*
C. platyclada *Pk.*
Clitocybe centralis *Pk.*
C. compressipes *Pk.*
C. maculata *Pk.*
Discina leucoxantha *Bres.*
Entoloma cyaneum *Pk.*
Geoglossum difforme *Fr.*
G. glabrum *Pers.*
Gomphidius gracilis *Berk.*
G. vinicolor *Pk.*
Hebeloma discomorbidum *Pk.*
H. parvifructum *Pk.*
Hygrophorus coloratus *Pk.*
H. hypothejus *Fr.*
Inocybe flocculosa (*Berk.*)
I. geophylla (*Sow.*) *Fr.*
I. umboninota *Pk.*
Leptonia longistriata *Pk.*
L. strictipes *Pk.*
Microglossum rufum (*Schw.*)
Naucoria myosotis *Fr.*
Nolanea delicatulus *Pk.*
Pholiota autumnalis *Pk.*
Tricholoma ustale *Fr.*

B. O. Dodge, Madison, Wis.

Boletus elbensis *Pk.*
Collybia lacunosa *Pk.*
Discina orbicularis *Pk.*
Lactarius zonarius (*Bull.*) *Fr.*
Lycoperdon cepiforme (*Wallr.*) *Bon.*
Marasmius minutus *Pk.*
Polyporus guttulatus *Pk.*
P. lentus *Berk.*
Steccherinum adustulum *Banker*

J. Dunbar, Rochester

Aster schreberi *Nees*
Sporobolus cryptandrus (*Torr.*) *Gray*

J. Dearness, London, Can.

Cladosporium triostei *Pk.*
Discosia artocreas (*Tode*) *Fr.*
Hypoxylon perforatum (*Schw.*)
Lachnella fraxinicola (*B. & Br.*)
Lophiostoma triseptatum *Pk.*
Ombrophila thujina *Pk.*
Pezicula acericola *Pk.*

C. E. Fairman, Lyndonville

Aleurodiscus oakesii (*B. & C.*) *Cke.*
Cytospora microspora (*Cd.*) *Rabenh.*
Dinemasporium acerinum *Pk.*
Gloeosporium caryae *E. & D.*
Hymenula olivacea *Pk.*
Naemospora croceola *Sacc.*
Peziza grisco-rosea *Ger.*
Plasmodiophora elaeagni *Schroet.*
Polyporus adustus (*Willd.*) *Fr.*
P. adus. carpineus *Sow.*
P. resinosus (*Schrad.*)
Poria aurea *Pk.*
Rhabdospora physostegiae *Pk.*
Sphaeronema acerinum *Pk.*
Sphaeropsis smil. latispora *Pk.*
Stereum complicatum *Fr.*

W. G. Farlow, Cambridge, Mass.

Polyporus sulphureus semialbinus *Pk.*

G. C. Fisher, DeFuniak Spa., Fla.

Agaricus floridanus *Pk.*

M. J. French, Utica

Boletus parasiticus *Bull.*
Hygrophorus chlorophanus *Fr.*
Polyporus radicatus *Schw.*
Lentinus lepideus *Fr.*
Stropharia bilamellata *Pk.*
Thelephora willeyi *Clinton*

H. Garman, Lexington, Ky.

Macrophoma suspecta *Pk.*

A. O. Garrett, Salt Lake City, Utah

Discula runcinata *E. & E.*
Lophodermium pinastri (*Schrad.*)

N. M. Glatfelter, St Louis, Mo.

Helvella macropus brevis *Pk.*
Panaeolus retirugis *Fr.*
Psathyra umbonata *Pk.*
Russula eccentrica *Pk.*

G. S. Graves, Newport

Fuligo ovata *(Schaeff.) Macbr.*

S. J. Greenfield, Ilion

Clavaria coralloides *L.*

J. G. Grossenbacher, Geneva

Myxosporium carpini *Pk.*

C. C. Hanmer, East Hartford, Conn.

Lepiota densifolia *Gill.*

F. D. Heald, Austin, Tex.

Cercospora kaki *E. & E.*

G. T. Howell, Rockville, Ind.

Merulius tremellosus *Schrad.*
Nolanea howellii *Pk.*
Polyporus radicatus *Schw.*
Trichia scabra *Rost.*

F. G. Howland, Saratoga Spa

Clitocybe dealbata sudorifica *Pk.*

M. E. Jones, Salt Lake City, Utah

Aecidium psoraleae *Pk.*
Cystopus candidus (*Pers.*) *Lev.*
Hyalospora polypodii (*DC.*) *Magn.*
Melampsoropsis pyrolae (*DC.*) *Arth.*
Phyllosticta arnicae *Fckl.*
Puccinia aberrans *Pk.*
P. asteris *Duby.*
P. balsamorrhizae *Pk.*
P. circaeae *Pers.*
Puccinia clarkiae *Pk.*
P. gayophyti *Billings*
P. gentianae (*Str.*) *Link.*
P. jonesii *Pk.*
Septoria lacustris *S. & T.*
Thecaphora deformans *D. & M.*
Uredo bigelowii *Thuem.*
Uromyces astragali (*Opiz*) *Sacc.*
U. borealis *Pk.*

C. H. Kauffman, Ann Arbor, Mich.
Pilocratera abnormis *Pk.*

F. D. Kern, Lafayette, Ind.
Septoria angustissima *Pk.*

L. C. C. Krieger, Cambridge, Mass.
Boletinus castanellus *Pk.*

W. T. Lakin, Cumberland, Md.
Boletus caespitosus *Pk.* Boletus subtomentosus *L.*

H. Lansing, Albany
Agaricus placomyces *Pk*

R. Latham, Orient Point

Apocynum cannab. pubescens (*R. Br.*)
Asclepias syriaca *L.*
Buellia myriocarpa (*DC.*) *Mudd*
Calvatia craniiformis (*Schw.*) *Morg.*
Camelina sativa (*L.*) *Crantz*
Cardamine parviflora *L.*
Carex canescens disjuncta *Fernald*
Carya alba (*L.*) *Koch*
Cinna latifolia (*Trev.*) *Griseb.*
Cladonia boryi *Tuck.*
Climacium kindbergii (*R. & C.*) *Grout*
Coronilla varia *L.*
Crepis setosa *Hall. f.*
Cyperus grayi *Torr.*
Erechtites hieracifolia (*L.*) *Raf.*
Fomes annosus *Fr.*
Gerardia maritima *Raf.*
G. purpurea *L.*
Glonium parvulum (*Ger.*) *Sacc.*
Gymnosporangium macropus *Link*
Herpotrichia diffusa (*Fckl.*) *E. & E.*
Hysterium pulicare *Pers.*
Juncus bufonius *L.*
Lecanidion indigoticum (*C. & P.*)
Lecanora varia saepicola *Fr.*
Lechea racemulosa *Mx.*
Lenzites betulina (*L.*) *Fr.*
Liatris scariosa *Willd.*
Osmorhiza claytoni (*Mx.*) *Clarke*
Panicum agrostoides *Spreng.*
P. amarum *Ell.*
Parmelia borreri rudecta *Tuck.*
P. borr. hypomela *Tuck.*
P. cetrata *Ach.*
P. colopodes (*Ach.*) *Nyl.*
P. perforata (*Jacq.*) *Ach.*
P. perfor. hypotropa *Nyl.*
Parmelia saxatilis sulcata *Nyl.*
Paspalum circulare *Nash*
P. setaceum *Mx.*
Phaeangella deformata (*Pk.*)
Physcia granulifera (*Ach.*) *Tuck.*
P. hispida (*Schreb.*) *Tuck.*
P. stellaris (*L.*) *Tuck.*
Physma luridum (*Mont.*) *Tuck.*
Picris hieracioides *L.*
Placodium cerinum (*Hoffm.*) *N. & H.*
P. ferrug. discolor *Willey*
Plantago elongata *Pursh*
Pleospora herbarum (*Pers.*) *Rabenh.*
Polygonum prolificum (*Small*)
Polyporus giganteus (*Pers.*) *Fr.*
Poria subacida vesiculosa (*B. & C.*)
Ramalina calicaris fraxinea *Fr.*
R. rigida (*Pers.*) *Tuck.*
Sabatia stellaris *Pursh*
Sagina decumbens (*Ell.*) *T. & G.*
Salix purpurea *L.*
Scirpus olneyi *Gray.*
Scleroderma flavidum *E. & E.*
Smilacina racemosa (*L.*) *Desf.*
Spartina patens juncea (*Mx.*)
Spergularia marina (*L.*) *Griseb.*
Sporobolus cryptandrus (*Torr.*)
Stipa avenacea *L.*
Teucrium canadense *L.*
Theloschistes conc. effusus *Tuck.*
T. flavicans *Wallr.*
Trametes pini (*Brot.*) *Fr.*
Trichostemma dichotomum *L.*
Usnea trichodea *Ach.*
Viburnum dentatum *L.*
V. venosum *Britton*
Vicia angust. segetalis (*Thuill.*)

C. E. Lewis, Orono, Me.

Phoma mali Schulz. & Sacc.

C. A. Mabie, Holley

Clitocybe multiceps tricholoma *Pk.*
Flammula flavida *Pers.*
Hypholoma sublateritium *Schaeff.*
Lepiota rhacodes *(Vitt.) Fr.*
Pholiota squarrosa *Muell.*
Pleurotus terrestris *Pk.*
Polyporus radicatus *Schw.*

A. H. Mackay, Halifax, Can.

Armillaria ventricosa *Pk.*
Clitocybe vilescens *Pk.*
Helvella sulcata *Afzel.*

J. A. Maney, Geneva

Peridermium pyriforme *Pk.*

E. R. Memminger, Flat Rock, N. C.

Craterellus cornucopioides *(L.) Pers.*

G. E. Morris, Waltham, Mass.

Boletus parasiticus *Bull.*
Lepiota rubrotincta *Pk.*
Pholiota autumnalis *Pk.*

M. V. Munger, Malone

Specimen of fruit of English walnut, Juglans regia *L.*, with 3-valved shell and 3-lobed seed.

J. B. S. Norton, College Park, Md.

Psathyrella disseminata (*Pers.*) *Fr.*

J. F. Peck, Rexford Flats

Two connected trunks of Ostrya virginiana *(Mill.) Koch*

F. T. Pember, Granville

Alisma plantago-aquatica *L.*
Grindelia squarrosa *(Pursh) Dunal*

L. H. Pennington, Syracuse

Fomes fraxineus *(Bull.) Fr.*
Guepinia palmiceps *Berk.*
Irpex mollis *B. & C.*
Poria floccosa *Fr.*
P. mutans *Pk.*
P. obducens *Pers.*

D. Reddick, Ithaca

Lysurus borealis *(Burt) C. G. Lloyd*

L. D. Rhind, Gloversville

Peridermium pyriforme *Pk.*

W. H. Ropes, Salem, Mass.

Agaricus campester *L.*
Cortinarius intrusus *Pk.*
Flammula pulchrifolia *Pk.*
Ornithogalum nutans *L.*

L. L. Shaff, Hannibal

Hypericum prolificum *L.*

P. Spaulding, Washington, D. C.

Cryptosphaeria populina *(Pers.)*
Cryptosporium macrospermum *Pk.*

F. C. Stewart, Geneva

Fusarium roseum *Link*
Gymnosporangium globosum *Farl.*
Hordeum trifurcatum *Jacq.*
Myxosporium castan. quercus *Pk.*
Phoma simillima *Pk.*
P. stictica *B. & Br.*
Phyllosticta betae *Oud.*
Stereum complicatum *Fr.*
Thlaspi perfoliatum *L.*

W. G. Stover, Columbus, Ohio

Marasmius delectans *Morg.*
Pleurotus corticatus *Fr.*

D. R. Sumstine, Pittsburg, Pa.

Hebeloma flexuosipes *Pk.*

K. F. Symonds, Utica.

Panus torulosus *Fr.*
Stropharia bilamellata *Pk.*

R. Thaxter, Cambridge, Mass.

Chaetomium indicum *Cd.*

C. Thom, Storrs, Conn.

Boletus subluteus *Pk.*

J. A. Thompson, Rochester

Roestelia aurantiaca *Pk.*

H. L. True, McConnelsville, Ohio

Gyromitra brunnea *Underw.*

L. Tucker & Son, Albany

Vermicularia beneficiens *Pk.*

D. B. Van Buren, Albany

Cladosporium paeoniae *Pass.* Roestelia aurantiaca *Pk.*

J. M. Van Hook, Bloomington, Ind.

Sporotrichum chryseum *Pk.* Stropharia thrausta *Kalchb.*

H. L. Wells, New Haven, Conn.

Boletus gertrudiae *Pk.* Pholiota dura *Bolt.*

H. H. Whetzel, Ithaca

Phoma simillima *Pk.*

T. E. Wilcox, Washington, D. C.

Boletus bicolor *Pk.* Boletus gracilis *Pk.*
Melanogaster durissimus *Cke.*

C. L. Williams, Glens Falls

Fusicladium dendriticum *(Wallr.)* Polypodium vulgare *L.*

D. B. Young, Albany

Cytospora salicis *(Cd.) Rabenh.* Eurotium subgriseum *Pk.*
Phoma piceina *Pk.*

SPECIES NOT BEFORE REPORTED

Amanita bisporigera Atk.

Ithaca. G. F. Atkinson. Collected by C. H. Kauffman. This appears like a dwarf white form of A. phalloides Fr.

Amanita floccocephala Atk.

Ithaca. G. F. Atkinson.

Amanita velatipes Atk.

Cortland. July. G. F. Atkinson.

Ascochyta menyanthis Oud.

Living leaves of buckbean, Menyanthes trifoliata L. Near Clemons, Washington co. August. S. H. Burnham.

Aulographum ledi n. sp.

Spots orbicular, grayish white, surrounded by a brown or purplish brown border; perithecia epiphyllous, few on a spot, elliptic

or oblong, often substellately lobed by confluence, erumpent, black, context whitish; asci obovate or subglobose; spores ovate or oblong, continuous, at length uniseptate, hyaline, 12–15 μ long, 6–8 μ thick.

Upper surface of leaves of Labrador tea, Ledum groenlandicum Oeder. Fine, St Lawrence co. August.

Remarkable and very distinct by its subglobose asci.

Maculae orbiculares, griseo-albidae, margine brunneo vel purpureo-brunneo circumdatae; perithecia epiphylla, pauca, elliptica oblongave, saepe confluentia et substellatim lobata, erumpentia, atra, contexta albida; asci obovati subglobosive; sporae ovatae oblongaeve, continuae, demum uniseptatae, hyalinae, 12–15 x 6–8 μ.

Biatora coarctata (Sm.) Nyl.

On nodules in drifting sand. Karner, Albany co. November. S. H. Burnham.

Calvatia craniiformis (Schw.) Morg.

Ground. Orient Point, Suffolk co. November. R. Latham.

Camelina microcarpa Andrz.

Grain fields. Bergen, Genesee co. June. This plant was erroneously reported as Camelina sativa (L.) Crantz. Specimens of the true C. sativa with broader seed vessels have been collected in oat fields near Orient Point by R. Latham and contributed by him to the herbarium.

Cercospora phlogina n. sp.

Spots orbicular or nearly so, .5–1 cm broad, sometimes confluent, blackish brown, usually with a small grayish center on the upper surface; hyphae epiphyllous, densely tufted, flexuous or irregular, 30–40 μ long, commonly aseptate, slightly colored; spores oblong or slightly narrowed toward the apex, 2–4-septate, 35–60 μ long, 3–4 μ thick.

Leaves of cultivated phlox. Floral Park, Nassau co. June. F. C. Stewart.

This species is related to C. omphacodes E. & H., but it differs in the characters of the spots, the position of the fungus and the thicker spores with fewer septa.

Maculae suborbiculars, .5–1 cm latae, aliquando confluentes, fuscoatrae, in centro supra griseae; hyphae epiphyllae, dense caes

pitosae, flexuosae vel irregulares, 30–40 μ longae, vulgo asep-tatae, leviter coloratae; sporae oblongae vel ad apicem attenuatae, 2-4-septatae, 35–60 x 3–4 μ.

Cladosporium paeoniae Pass.

Living leaves of paeonia. Batavia. August. D. B. VanBuren. Collected by Alice G. Fisher. The fungus forms large brown spots on the leaves. It sometimes occupies the entire leaf and kills it

Climacium kindbergii (R. & C.) Grout

Roots of trees in swampy places. Orient Point. December R. Latham.

Clitocybe biformis n. sp.

Plate VI, figures 9–15

Pileus fleshy, thin, firm, broadly convex or nearly plane, be coming centrally depressed, subumbilicate or broadly infundibuli-form, glabrous, even or slightly striate on the margin, pale buff, sometimes more brightly colored in the center, flesh white or whitish, margin at first involute; lamellae thin, close, narrow, de-current, whitish, becoming pallid or subcinnamon with age or in drying; stem equal or nearly so, firm, solid or stuffed, often curved, sometimes eccentric, tomentose at the base, colored like the pileus; spores subglobose or broadly elliptic, 5–6 μ long, 4–5 μ broad.

Pileus 2.5–7.5 cm broad; stem 2.5–3.5 cm long, 4–8 mm thick.

In mixed woods. Growing in arcs of circles. North Elba. Essex co. September.

When young the pileus is convex, when old it is centrally de-pressed or sometimes broadly infundibuliform. This change of shape has suggested the specific name. The change in the color of the lamellae is more remarkable. The species is closely allied to Clitocybe gilva (Pers.) Fr. from which it may be separated by the whitish color of the flesh and the peculiar change of color in the lamellae. This passes from whitish to fawn color or pale cinnamon. Its habit of growing in circles is also peculiar. The mycelium binds together a mass of dirt and decaying vege-table matter. These adhere closely to the base of the stem when the mushroom is pulled from its place of growth, and make the stem appear as if bulbous.

Pileus carneus, tenuis, firmus, late convexus vel subplanus, deinde centro depressus, subumbilicatus vel late infundibuliformis,

glaber, margine levis vel striatulus, pallide luteolus, in centro aliquando luteus, carne alba albidave; lamellae tenues, confertae, angustae, decurrentes, in senectute siccitateve pallide cinnamomeae; stipes subaequalis, firmus, solidus, farctusve, aliquando curvus vel eccentricus, basi tomentosus, in colore pileo similis; sporae subglobosae vel late ellipsoideae, 5–6 x 4–5 μ.

Clitocybe maxima G. & M.

Catskill mountains. September. Mrs F. C. Sherman. North Elba. C. H. Peck. This is a large and rare species, appearing as if it might be a luxuriant development of Clitocybe infundibuliformis (Schaeff.) Fr.

Cortinarius croceofolius n. sp.

Plate VI, figures 1–8

Pileus fleshy, thin, broadly convex or nearly plane, obtuse or obtusely umbonate, dry, slightly fibrillose specially on the margin, brownish cinnamon, often paler or saffron yellow on the margin, flesh pale yellow, grayish or dingy when dry; lamellae thin, close, saffron yellow verging to orange, then brownish cinnamon, often yellow crenulate on the margin; stem equal or slightly thickened at the base, fibrillose above, saffron yellow, hollow, veil similarly colored; spores broadly ellipsoid, 6–7 μ long, 4–5 μ broad.

Pileus 2.5–5 cm broad; stem 2.5–4 cm long, 4–6 mm thick.

Mossy ground in or on the borders of woods of spruce and balsam fir trees. North Elba. September.

This species belongs to the section Dermocybe and is closely related to Cortinarius cinnamomeus (L.) Fr. and C. semisanguineus (Fr.) Kauffm. but in the color of the lamellae it is intermediate between them and from both it is readily separated by its smaller spores. From C. croceocolor Kauffm., of which I have seen no specimens, it may be separated by the darker color of the pileus and the different colors of the lamellae.

Pileus carneus, tenuis, late convexus vel subplanus, obtusus vel obtuse umbonatus, siccus, leviter fibrillosus, fusco-cinnamomeus, saepe margine pallidior vel croceus, carne flava, in siccitate grisea; lamellae tenues, confertae, croceae aurantiacaeve, demum fusco-cinnamomeae, saepe acie flavo-crenulatae; stipes aequalis vel leviter basi incrassatus, supra fibrillosus, cavus, croceus, velo croceo; sporae late ellipsoideae, 6–7 x 4–5 μ.

Cortinarius glaucopus (Schaeff.) Fr.

Woods. North Elba. September.

Cortinarius napus Fr.

Pittsford, Monroe co. September. F. S. Boughton.

Cortinarius triumphans Fr.

In groves of young deciduous trees. New Lebanon, Columbia co. September. The pileus in our specimens was viscid but glabrous.

Crataegus aristata n. sp. Sarg.

(Pruinosae)

Glabrous with the exception of the hairs on the young leaves and calyx-lobes. Leaves ovate to oval, long-pointed and acuminate at the apex, cuneate at the entire base, finely often doubly serrate above, with straight glandular teeth and slightly divided into 4 or 5 pairs of small acuminate lobes; more than half-grown when the flowers open early in June and then yellow green, smooth and furnished with a few hairs on the midribs above, and pale below, and at maturity thick, bluish green, paler on the lower surface than on the upper surface, 4.5–6 cm long and 3–5 cm wide, with thin midribs and primary veins; petioles slender, narrowly wing-margined at the apex, slightly hairy on the upper side early in the season, soon becoming glabrous, 1–1.2 cm in length; leaves on vigorous shoots broadly ovate to slightly obovate, rounded or cuneate at the base, more coarsely serrate, conspicuously lobed, and often 7–8 cm long and 5.5–6 cm wide, with stout rose-colored midribs and petioles. Flowers 1.8–2 cm in diameter, on long slender pedicels, in 6–15-flowered corymbs, the lower peduncles from the axils of upper leaves; calyx-tube narrowly obconic, the lobes gradually contracted from the base, short, broad, acuminate, glandular-serrate near the middle, slightly hairy on the inner surface, reflexed after anthesis; stamens 20; filaments persistent on the fruit; anthers pink; styles 3 or 4. Fruit ripening early in October, on long slender drooping pedicels, in few-fruited clusters, subglobose, slightly 5-angled, pruinose, bright red, marked by occasional pale dots, about 1 cm in diameter; calyx prominent with a long tube, a deep broad cavity wide and tomentose in the bottom, and spreading and reflexed lobes; flesh thick, yellow, dry and mealy; nutlets 3–5, narrowed and rounded at the apex, broader

and rounded at the base, 5.5–6 mm long and 4–4.5 mm wide, the narrow hypostyle extending to below the middle of the nutlet.

A shrub 3–4 m high, with numerous wide spreading branches and slender zigzag branchlets dark orange green and marked by pale lenticels when they first appear, becoming pale orange brown in their first season and light brown the following year, and armed with numerous stout straight or slightly curved purple spines 3.5–4.5 cm long.

Roadsides near Rossie, St Lawrence co. C. H. Peck (#12 Re), June 12 and September 29, 1909.

Crataegus brainerdi Sarg.

Rocky places. Rossie. June. The plant reported under this name in Bulletin 75, page 12, was later decided by Professor Sargent to be a distinct species and was described and reported under the name Crataegus mellita Sarg.

Crataegus longipedunculata Sarg.

Near Canandaigua. June and October. Miss E. C. Webster.

Crataegus nemorosa n. sp. Sarg.

(Medioximae)

Glabrous. Leaves ovate, acuminate, rounded or abruptly cuneate at the base, sharply often doubly serrate with straight glandular teeth and deeply divided into 3 or 4 pairs of slender acuminate lobes usually pointing toward the apex of the leaf; about one-half grown when the flowers open at the end of May or early in June and then very thin and yellow green, and at maturity thin, blue green and lustrous on the upper surface, pale on the lower surface, 4.5–5 cm long and 3–3.5 cm wide, with thin midribs and primary veins, turning deep vinous red in the autumn on the upper side and remaining pale below; petioles slender, slightly wing-margined at the apex, glandular, with minute persistent glands, 1.5–2 cm in length; leaves on vigorous shoots broadly ovate, acute, long-pointed at the apex, rounded or truncate at the entire base, coarsely serrate, deeply lobed and often 8–9 cm long and broad. Flowers 1.5–1.8 cm in diameter, on long slender pedicels, in small 5–8-flowered corymbs, the lower peduncles from the axils of upper leaves; calyx-tube broadly obconic, the lobes gradually narrowed from a wide base, short, acuminate, entire or furnished near the

middle with 1 or 2 minute glandular teeth, reflexed after anthesis. stamens 5–10; anthers pink; styles 3 or 4. Fruit on slender drooping pedicels, in few-fruited clusters, short-oblong to obovate, crimson, slightly pruinose, marked by dark dots, about 1 cm in diameter; calyx little enlarged, with a wide shallow cavity pointed in the bottom and spreading and appressed persistent lobes; flesh thin, dry and hard, green tinged with red; nutlets 2–4, broad and rounded at the apex, acute at the base, rounded and only slightly ridged on the back, 5.5–6 mm long and 3–3.5 mm wide.

A shrub 2–3 m high, with small stems covered with dark gray bark and numerous ascending and spreading branches, and slender slightly zigzag branchlets dark orange green and marked by pale lenticels when they first appear, becoming bright chestnut brown and lustrous in their first season and dark reddish brown the following year, and armed with numerous slender straight chestnut brown spines 3.5–6 cm long.

Hillsides near Painted Post, Steuben co., G. D. Cornell (№ 119 type), September 22, 1907, May 26, 1908; C. H. Peck, June 2 and September 21, 1909; G. D. Cornell (№ 119 A with 6–10 stamens and larger short-oblong fruit a little if at all narrowed at the base), Painted Post, September 22, 1907, May 28, 1908.

Crepis setosa Hall. f.

Orient Point. September. R. Latham.

Cryptosporium macrospermum n. sp.

Heaps scattered, at first covered by the epidermis, then erumpent through orbicular or elliptic apertures, about 1 mm broad, black, sometimes capped by a whitish or greenish white globule of spores, the spore mass enlarged and softened when moist; spores slender, fusiform, falcate or rarely sigmoid, generally subulate at one end, acute or subacute at the other, hyaline and often 2–6 nucleate, 60–80 μ long, 5–6 μ broad.

Dead bark of balsam fir, Abies balsamea (L.) Mill. Adirondack mountains, Franklin co. May. G. G. Atwood and P. Spaulding.

The fungus has so far developed only where the bark is dead and it is therefore uncertain that it causes the death of the bark and the wood beneath.

Acervuli sparsi, primus epidermide tecti, deinde per aperturas orbiculares ellipticasve erumpentes, 1 mm lati, nigri, aliquando

sporarum globulum albidum exudantes; sporae graciles, fusiformes, falcatae, rare sigmatoideae, vulgo apice subulatae, basi acutae subacutaeve, hyalinae, saepe 2–6-nucleatae, 60–90 x 5–6 μ.

Cycloloma atriplicifolium (Spreng.) Coult.

Waste places. Albany. September. S. H. Burnham.

Cytospora microspora (Cd.) Rabenh.

Dead branches of thorn bush. Medina, Orleans co. October. C. E. Fairman.

Diplodia linderae E. & E.

Dead branches of spice bush, Benzoin aestivale (L.) Nees. Tripoli, Washington co. April. S. H. Burnham.

Eccilia mordax Atk.

Near Ithaca. July. G. F. Atkinson. Collected by C. O. Smith.

Eurotium subgriseum n. sp.

Perithecia minute, 100–125 μ in diameter, densely clustered, globose or subglobose, pale yellow; spores globose, greenish yellow in mass, 6–8 μ in diameter.

Dead wood and bark of sycamore branches, Platanus occidentalis L. Brooklyn. March. D. B. Young.

This is found growing with and among the conidial form, Aspergillus subgriseus Pk. Torrey Bot. Club Bul. 22:210. The color of this mold varies from whitish to grayish or bluish gray. The fertile hyphae are erect, continuous, 100–125 μ long and 7–8 μ thick, terminating in a subglobose vesicle 30–40 μ in diameter, on which strings of globose hyaline spores or conidia are borne. These conidia are 3.5–4 μ broad. They are smaller than those of the Aspergillus glaucus (L.) Link, the conidial form of Eurotium herbariorum (Wigg.) Link. The branches were collected in Brooklyn by J. J. Levison, May 12, 1909 but were kept in a moist atmosphere under cover for several months and the fungus probably developed during this time.

Perithecia minuta, 100–125 μ in diam., dense caespitosa, globosa subglobosave, flava; sporae globosae, flavido-virides, 6–8 μ in diam.

Gloeosporium caryae E. & D.

Leaves of hickory. Lyndonville, Orleans co. October. C. E. Fairman.

Gloeosporium divergens n. sp.

Spots large, irregular, commonly occupying the lobes and margin of the leaves, definite, pale brown, either with or without a slight inconspicuous reddish brown margin on the upper surface; heaps mostly hypophyllous, rarely epiphyllous and then chiefly along the veinlets, 120–160 μ broad, darker colored than the spots; spores narrowly elliptic or oblong, often 2-nucleate, hyaline, 10–15 μ long, 4–6 μ broad.

Living leaves of white oak, Quercus alba L. Menands, Albany co. July.

Maculae magnae, irregulares, foliorum lobas marginemque occupantes, definitae, pallide brunneae, interdum supra margine angusto inconspicuo, rufescento-brunneo; acervuli vulgo hypophylli, rare epiphylli et tunc ad venulas, 120–160 μ lati, maculis brunniores; sporae anguste ellipsoideae oblongaeve, saepe 2-nucleatae, hyalinae, 10–15 x 4–6 μ.

Grindelia squarrosa (Pursh) Dunal

Dry pastures on hillsides. Granville, Washington co. September. F. T. Pember. A showy introduced plant.

Mr Pember remarks concerning it, "I can only suggest that it may have been introduced in western grass seed. It is scattered about over two acres, and in some places constitutes nearly all the vegetation. There must be several thousand plants of it."

Helianthus petiolaris Nutt.

In a lawn. Rochester. July. M. S. Baxter. Introduced from the West. Determined by Dr P. A. Rydberg. Possibly not permanently established.

Heterothecium pezizoideum (Ach.) Flot.

Spruce bark. Black mountain, Washington co. August. S. H. Burnham.

Hygrophorus caprinus (Scop.) Fr.

Near Ithaca. November. G. F. Atkinson. Collected by C. H. Kauffman.

Hypericum prolificum L.

Hannibal, Oswego co. August. L. L. Shaff.

This is a large shrubby plant and it seems strange that it should so long have escaped detection in our State unless it is very local.

The station is on or near its northern limits. Mr Shaff writes that he first discovered the plant about 25 years ago. At that time and for 8 years after he kept sheep and the plant did not spread much. For 17 years he has kept no sheep and during this time it has spread over his pastures and now occupies about five acres.

Hypochnus tristis Karst.

On the base of young spruce trees. North Elba. September. The specimens are sterile and to this extent are doubtful. Professor E. A. Burt, specialist in this group of fungi, decides that it is probably this species.

Inocybe rimosoides n. sp.

Pileus thin, broadly campanulate or expanded, umbonate, glabrous, shining, substriate, radiately cracked, pale yellow; lamellae close, sinuate, adnexed or nearly free, pallid becoming brownish ferruginous; stem equal, glabrous, hollow, pallid; spores even, 8–10 μ long, 5–6 μ broad, cystidia none.

Pileus 2–3.5 cm broad; stem 2.5–4.5 cm long, 2–3 mm thick.

Grassy ground. Menands. August.

Related to Inocybe rimosa (Bull.) Fr. from which it may be distinguished by its paler and more acutely umbonate pileus, its hollow stem, smaller spores and the absence of cystidia.

Pileus tenuis, late campanulatus expansusve, umbonatus, glaber, nitidus, substriatus, radiate rimosus, luteolus; lamellae confertae sinuatae, adnexae vel subliberae, pallidae deinde brunneo-ferrugineae; stipes aequalis, glaber, fistulosus, pallidus; sporae leves, 8–10 x 5–6 μ cystidia nulla.

Lactarius boughtoni n. sp.

Plate VI, figures 1–7

Pileus fleshy, firm, becoming fragile with age, broadly convex nearly plane or centrally depressed, often deflexed on the margin, dark brownish red (walnut brown), flesh whitish, subconcolorous when moist, milk white very scanty or sometimes none, taste acrid; lamellae thin, close, adnate or slightly decurrent, whitish becoming pale buff or darker with age; stem firm, nearly equal, hollow, glabrous, colored like but often paler than the pileus, generally paler at the top than below and there slightly pruinose; spores subglobose, 8–9 μ long, 7–8 μ broad.

Pileus 5–10 cm broad; stem 4–10 cm long, 6–12 mm thick.

Ground in woods and in swamps. Old Forge, Herkimer co. August. F. S. Boughton. North Elba. September. C. H. Peck.

Closely allied to Lactarius rufus (Scop.) Fr. but separated by its paler lamellae, hollow stem, absence of an umbo and very scanty milk. The stem is often pointed at the base. Edible according to F. S. Boughton, who says it "entirely lost its acridity in cooking and was very fine in flavor." I have not tried it.

Pileus carneus, firmus, senectute fragilis, late convexus subplanus vel centro depressus, saepe margine deflexus, lateritius, carne albida, lacte albo, parco vel nullo, sapore acri; lamellae tenues, confertae, adnatae vel subdecurrentes, albidae vel lutescentes; stipes firmus, subaequalis, cavus, glaber, pileo in colore similis vel pallidior; sporae subglobosae, 8–9 x 7–8 μ.

Lentinus piceinus n. sp.

Pileus thin, dimidiate, sessile or with a very short stem, broadly convex or nearly plane, glabrous, pale alutaceous; lamellae few, distant, unequal, serrate-dentate, pallid; stem when present very short; spores minute, subglobose, 4–5 μ in diameter.

Pileus 8–12 mm broad; stem about 2 mm long.

Bark of red spruce, Picea rubra (DuRoi) Dietr. Long Lake, Hamilton co. July.

A small and rare species. Found but once.

Pileus tenuis, dimidiatus, sessilis vel breviter stipitus, late convexus subplanusve, glaber, subalutaceus; stipes brevissimus; sporae minutae, subglobosae, 4–5 μ in diam.

Lychnis coronaria (L.) Desr.

Canandaigua. July. Mrs E. P. Gardner. An introduced plant cultivated for ornament but sometimes escaping from cultivation.

Machaeranthera pulverulenta (Nutt.) Greene

Cobbs hill near Rochester. July. Miss F. Beckwith. Introduced from the West. Determined by Dr P. A. Rydberg.

Macrosporium heteronemum pantophaeum Sacc.

In gardens on young decaying summer crookneck squashes. Menands. August.

Marasmius contrarius n. sp.

Pileus submembraneous, broadly convex or nearly plane, often slightly uneven, glabrous, whitish or white with a brown center becoming grayish or subalutaceous in drying; lamellae thin, subdistant, sometimes branched or irregular, adnate or slightly decurrent, whitish, the interspaces slightly venose; stem slender, solid, downy, grayish-tawny, with tawny tomentum at the base, white within; spores 7–9 μ long, 4–5 μ broad.

Pileus 4–10 mm broad; stem 2–3 cm long, 1–1.5 mm thick.

Gregarious. Damp mossy places under spruce and balsam fir trees to the fallen leaves of which the stem is commonly attached. North Elba. June.

The texture of both pileus and stem is tough. The brown center often disappears in drying. This, and the whitish color changing to pale tan in drying, are such an unusual occurrence as to suggest the specific name. Related to M. ramulinus Pk. but at once separated from it by its pileus changing color in drying, its longer solid stem being more downy and tawny with a distinctly tomentose base and by its habitat.

Pileus submembraneus, late convexus subplanusve, saepe subrugosus, glaber, albus albidusve in centro brunneus, in siccitate griseus vel subalutaceus; lamellae tenues, subdistantes, aliquando irregulares vel ramosae, adnatae vel leviter decurrentes, albidae, interstitiis venosis; stipes gracilis, solidus, pubescens, fulvo-griseus, basi fulvo-tomentosus, intra alba; sporae 7–9 x 4–5 μ.

Myxosporium carpini n. sp.

Heaps minute, greenish black, nestling in the bark, covered by the epidermis; spores oblong or elliptic oblong, exuding in pale yellow tendrils, binucleate, hyaline, 8–12 μ long, 3.5–4 μ broad.

On bark of water beech, Carpinus caroliniana Walt. Geneva. June. J. G. Grossenbacher.

Acervuli minuti, in cortice nidulantes, epidermide tecti, olivaceo-nigri; sporae oblongae vel oblongo-ellipsoideae, binucleatae, hyalinae, 8–12 x 3.5–4 μ, in cirrhis exudantes.

Naemospora croceola Sacc.

Oak bark. Lyndonville. October. C. E. Fairman.

Naucoria sororia Pk.

Growing on manure. McLean, Tompkins co. September. G. F. Atkinson. This species is doubtless often confused with

Naucoria suborbicularis (Bull.) Fr. from which it is separated by its farinaceous odor and taste, its fragile character, lacunose or pitted pileus and its stem striated at the top.

Oidium asteris-punicei n. sp.

Amphigenous indeterminate, widely and thinly effused, whitish; fertile hyphae suberect, hyaline, septate, simple; spores terminal catenulate, ellipsoid or oblong, rounded or subtruncate at the ends, hyaline, 30–60 μ long, 15–20 μ broad.

Living or languishing leaves of red stemmed aster, Aster puniceus L. Letchworth Park, Wyoming co. September.

Related to Oidium erysiphoides Fr., but I find no rosy tinted tufts and the hyphae are nearly as broad as the spores. Perhaps it is the conidial stage of Erysiphe cichoracearum DC.

Amphigenum, indeterminatum, late et tenuiter effusum, albidum; hyphae fertiles suberectae, hyalinae, septatae, simplices; sporae catenulatae, acrogenae, ellipsoideae oblongaeve, utrinque obtusae subtruncataeve, hyalinae, 30–60 x 15–20 μ.

Oxybaphus floribundus Chois.

Waste places. Albany. September. S. H. Burnham. Introduced from the West but apparently well established.

Pertusaria leioplaca (Ach.) Schaer.

Bark of hop hornbeam. Ostrya virginiana (Mill.) Koch. Helderberg mountains, Albany co. May. S. H. Burnham.

Pholiota terrigena Fr.

Grassy ground. Utica. October. G. F. Atkinson. In drying, this mushroom is said to emit an odor similar to that of mice.

Phoma piceina n. sp.

Perithecia few, scattered, prominent but minute, black; spores ellipsoid or oblong, hyaline, 8–12 μ long, 4–5 μ broad.

On leaves of red spruce Picea rubra (DuRoi) Dietr. Adirondack mountains near Lake Pleasant, Hamilton co. May. D. B. Young.

In these specimens the leaves have been injured by some insect which has caused a swelling at the base and may have been the primary cause of the death of the leaves.

Perithecia pauca, sparsa, prominentia, minuta, atra; sporae ellipsoideae oblongaeve, hyalinae, 8–12 x 4–5 μ.

Phoma simillima n. sp.

Perithecia densely gregarious, slightly prominent, at first covered by the epidermis, then erumpent, convex or depressed, minute, black; spores ellipsoid, hyaline, 8–12 long, 5–8 μ broad.

Dead bark of pear trees, Pyrus communis L. Ithaca. H. H. Whetzel. Rochester. April. F. C. Stewart.

This differs from Cytospora piri Fckl., which inhabits branches of pear trees, by its much smaller spores. The perithecia commonly burst through transverse apertures in the epidermis.

Perthecia dense gregaria, leviter prominentia, primus epidermide tecta, deinde erumpentia, convexa vel depressa, minuta, atra; sporae ellipsoidea, hyalinae, 8–12 x 5–8 μ.

Phoma stictica B. & Br.

On leaves of common box tree, Buxus sempervirens L. Geneva. January. F. C. Stewart. Collected by S. M. McMurran. This Phoma is said to be the spermogonium of Diaporthe retecta (F. & N.) Sacc.

Phyllosticta betae Oud.

Living leaves of beet, Beta vulgaris L. Flint, Ontario co. August. F. C. Stewart.

Phyllosticta subtilis n. sp.

Spots suborbicular, .5–3 cm broad, sometimes confluent, indefinite, reddish brown; perithecia numerous, densely gregarious, hypophyllous, minute, 80–120 μ broad, blackish; spores minute, oblong, straight or curved, hyaline, 8–12 μ long, 1.5–2 μ broad.

Leaves of Carya. Painted Post. September.

This species departs from the ordinary character of the genus in its narrow spores.

Maculae suborbiculares, .5–3 cm latae, aliquando confluentes, indeterminatae, fuscae; perithecia numerosa, dense gregaria, hypophylla, minuta, 80–120 μ lata, nigra; sporae minutae, oblongae, rectae curvaeve, hyalinae, 8–12 x 1.5–2 μ.

Physcia hispida (Schreb.) Tuck.

On red cedar wood, Juniperus virginiana L. Orient Point. April. Sterile form. R. Latham.

Picris hieracioides L.

Orient Point. August and September. R. Latham. An introduced plant.

Pilocratera abnormis n. sp.

Cups scattered, stipitate, small, 1–4 mm broad, obconic or saucer-shaped, pale grayish, obscurely pubescent; stem 1–3 mm long, inserted or swollen at the base into a minute hairy bulb, colored and adorned like the cup; asci subcylindric, 160–200 μ long, 10–12 μ broad, spores oblong or subfusiform, straight or slightly curved, slightly narrowed toward each end, commonly containing a single large central nucleus, 25–40 μ long, 8–10 μ broad, paraphyses filiform.

Decorticated wood of yellow birch, Betula lutea Mx. Fine. August. Found also on decaying wood at Ishpeming, Michigan. August. C. H. Kauffman.

The minute pubescence is somewhat compacted into tufts on the margin but the tufts are not long enough to give a fimbriate or ciliate appearance to the margin.

Cupulae sparsae, stipitatae, parvae, 1–4 mm latae, obconicae vel acetabuliformes, pallido-griseae, minute pubescentes; stipes 1–3 mm longus, insititius vel basi bulbillosus, hirtus, cupulae in colore similis; asci subcylindracei, 160–200 x 10–12 μ; sporae oblongae subfusiformesve, rectae vel leviter curvatae, utrinque leviter angustatae, vulgo uninucleatae, 25–40 x 8–10 μ, paraphyses filiformes.

Placodium ferrugineum discolor Willey

On bark of red cedar, Juniperus virginiana L. Orient Point. April. R. Latham.

Plasmodiophora elaeagni Schroeter

On roots of Elaeagnus longipes Gray. Lyndonville. November. C. E. Fairman.

Pleurotus approximans n. sp.

Pileus thin, tough, subgelatinous, dimidiate or subflabelliform or with a short stemlike base, at first involute on the margin and more or less strigulose hairy, specially toward the base, becoming pruinose or subglabrous with the thin even margin expanded or slightly recurved, pallid, grayish brown or smoky brown, 6–12 mm broad; lamellae narrow, close, tapering toward each end, converging to a

basal point, creamy yellow, minutely bristly on the edge and sides with the projecting hyaline pointed cystidia which are 60–80 μ long, 15–20 μ broad.

On decaying wood and bark, apparently of red maple, Acer rubrum L. Sylvan Beach, Oneida co. July.

This species is closely related to Pleurotus spiculifer Berk., a species founded on specimens collected on decaying wood on New Ireland island in the Pacific ocean, and described as having the pileus very glabrous membranous and pellucidly striate, characters not applicable to our specimens. For this reason we have considered our mushroom distinct, though in other respects the characters are very similar. Our specimens revive on the application of moisture and then the flesh is colored like the surface of the pileus and subgelatinous, .4–.5 mm thick. When dry it is white, slightly thinner, and appearing to have a thin upper gelatinous layer. The spores are not known in our specimens nor described in P. spiculifer.

Pileus tenuis, lentus, subgelatinous, dimidiatus aut subflabelliformis, sessilis vel substipitatus, primo margine involutus, hirtus praesertim ad basem, demum pruinosus vel subglaber, margine tenue expanso vel leviter recurvato pallidus, griseo-brunneus vel fumoso-brunneus, 6–12 mm latus; lamellae angustae, acie lateribusque cystidiis minute setulosus; cystidia hyalina lageniformia, 60–80 x 15–20 μ.

Ramalina rigida (Pers.) Tuck.

On red cedar, Juniperus virginiana L. Orient Point. December. R. Latham.

Rhabdospora physostegiae n. sp.

Perithecia caulicolous, scattered or seriate, erumpent, globose-depressed, black; spores filiform, hyaline, nearly or quite straight, 25–30 μ long, 1–1.5 μ broad.

Dead stems of Physostegia virginiana (L.) Benth. Lyndonville. May. C. E. Fairman.

Perithecia sparsa vel seriatim posita, erumpentia, globosa depressave, atra; sporae filiformes, hyalinae, subrectae, 25–30 x 1–1.5 μ.

Sideranthus gracilis (Nutt.) Rydb.

In a lawn. Rochester. July. M. S. Baxter. Near the reservoir on Cobbs hill. Miss F. Beckwith. Introduced from the West and possibly not permanently established.

Sphaeropsis smilacis latispora n. var.

Dead branches of hispid greenbrier, Smilax hispida Muhl. Yates, Orleans co. March. C. E. Fairman.

This variety differs from the typical form in its broader spores. Spores 17–20 μ long, 11–13 μ broad. In the type they are 15–20 long, 6–8 μ broad.

Sporae 17–20 x 11–13 μ.

Sporotrichum grisellum Sacc.

Dead bark. Ithaca. G. F. Atkinson. Collected by C. O. Smith.

Theloschistes flavicans Wallr.

On red cedar, Juniperus virginiana L. Orient Point. April. R. Latham. This is a beautiful lichen but the specimens are sterile.

Thlaspi perfoliatum L.

Geneva. May. F. C. Stewart. A rare plant introduced from Europe.

Trichothecium subgriseum n. sp.

Hyphae thinly effused, covering the matrix with a very thin grayish buff subvelvety stratum, sparsely branched, septate, hyaline, 6–8 μ thick; spores obovate or oblong-elliptic, simple or obscurely uniseptate, hyaline, 16–24 μ long, 8–10 μ broad.

Decaying wood of yellow birch, Betula lutea Mx. and sugar maple, Acer saccharum Marsh. Fine. August.

Apparently related to Trichothecium griseum Speg. but differing in its branching hyphae and more narrow and often simple spores.

Hyphae tenuiter effusae, matricem strato tenue, griseo-luteolo subvelutino obducentes, sparse ramosae, septatae, hyalinae, 6–8 μ latae; sporae obovatae oblongae vel ellipsoideae, continuae vel obscure uniseptatae, hyalinae, 16–24 x 8–10 μ.

Triosteum perfoliatum L.

Glenmont, Albany co. June. S. H. Burnham. The specimens formerly attributed to this species are now referred to Triosteum aurantiacum Bickn. which is the more common species in the northern part of the State.

Usnea trichodea Ach.

Orient Point. December. R. Latham. The specimens are sterile.

Vermicularia beneficiens n. sp.

Perithecia thin, depressed, orbicular or ellipsoid, .3–.5 mm broad, densely gregarious, at first covered by the epidermis, then erumpent, black, adorned with numerous black setae, sometimes paler at the top, 80–240 μ long, 4–6 μ broad; spores cylindric, straight or slightly curved, acute at one or both ends, sometimes pseudouniseptate, hyaline, 20–30 μ long, 4–4.5 μ broad; sporophores cylindric or subclavate, obtuse, crowded, 12–15 μ long.

On living stems of live-forever, Sedum purpureum Tausch. Davenport, Delaware co. July. Luther Tucker & Son. Collected by W. Gillander.

The fungus attacks the stem at or near the base which soon turns brown both without and within and becomes hollow in the affected part. The leaves, being deprived of their necessary nourishment, gradually wither, fade and drop, beginning at the lower part of the stem and gradually advancing upward until the stem is nearly or wholly denuded and finally dies. The root also early becomes discolored and must necessarily cease to perform its natural functions.

The species is similar to Vermicularia herbarum West. and may possibly have been previously confused with it, since that species has been reported as occurring on Sedum acre L., S. album L., S. maximum Suter and S. reflexum L. Our plant, however, differs not only in its host plant, but also differs from the characters assigned to V. herbarum in having the perithecia larger and densly gregarious and in having the spores longer, acute at the ends, and often spuriously septate. It also appears to be specially distinct in its parasitic character. On this account it has been announced as a beneficial fungus because of its availability as a destructive agent in destroying a weed so tenacious of life as the live-forever. This character of the fungus has suggested the specific name here assigned to it.

Perithecia tenua, depressa, orbicularia vel ellipsoidea, .3–.5 mm lata, dense gregaria, circumambientia, primum epidermide tecta, deinde erumpentia, atra, setis numerosis, rigidis, erectis vel divergentibus, acutis, atris ornata, quae aliquando apice pallescentes, 80-240 x 4–6 μ; sporae cylindraceae, rectae vel leviter curvatae, vulgo utrinque acutae, aliquando pseudouniseptatae, hyalinae, 20–30 x 4–5 μ, basidia cylindracea subclavatave, obtusa, conferta, 12–15 μ longa.

Vermicularia pomicola n. sp.

Perithecia gregarious, hemispheric or subglobose, bristly with numerous subulate black erect or divergent setae, 120–280 μ long, 7–8 μ broad; spores straight or slightly curved, pointed at each end, 25–35 μ long, 4–5 μ broad.

On apples lying on the ground. New Lebanon. September.

Spores longer than in Vermicularia pomona Sacc. which occurs on appletree leaves and is considered a variety of V. trichella Fr.

Perithecia gregaria, hemisphaerica subglobosave, setis numerosis subulatis, atris, erectis divergentibusve ornata, 120–280 x 7–8 μ; sporae rectae vel leviter curvae, utrinque acutae, 25–35 x 4–5 μ.

Verticillium agaricinum (Lk.) Cd.

On Flammula squalida Pk. Thompsons lake, Albany co. September. The parasite forms a thin whitish pruinosity on the surface of the deformed pileus. It occurs also on the pileus of Tricholoma russula (Schaeff.) Fr. at Pittsford, Monroe co. September. F. S. Boughton. The spores of the parasite are very variable, 6–12 μ long and 4–5 μ broad. The mycelium causes the pileus to become enlarged, irregular or deformed and the lamellae to become irregular and sometimes branched or even anastomosing and discolored. It is perhaps the conidial stage of some species of Hypomyces.

Viburnum venosum Britton

Orient Point. July. R. Latham. The species is well named, the veins of the leaves being very prominent and conspicuous on the lower surface.

Vicia villosa Roth

Canton, St Lawrence co. June. G. H. Chadwick. Introduced and cultivated for fodder, but escaping from cultivation and manifesting a tendency to become naturalized. The flowers are commonly blue and resemble those of Vicia cracca L. but a white flowered form occurs.

REMARKS AND OBSERVATIONS

Aster laevis L.

A very noticeable form or possibly a variety of this species occurs on Pinnacle hill near Rochester. November. Miss F. Beckwith. It differs from the common forms in its late flowering and in its long narrow panicle the branches of which are suberect, 2.5–5 cm long.

Aster undulatus loriformis Burg.

West Fort Ann, Washington co. October. S. H. Burnham.

Boletinus paluster Pk.

This beautiful small species often grows on decaying wood and the mossy bases of trees. It has a white mycelium and pale yellow flesh. Wounds of the flesh often become red after long exposure. The flavor is tardily but sharply acrid.

Brassica arvensis (L.) Ktze.

A white flowered form occurs occasionally. Menands. July.

Cantharellus infundibuliformis nigricans n. var.

Pileus blackish; hymenium very decurrent, the decurrent part destitute of lamellae. Otherwise as in the common form with which it grows.

Among mosses in swamps. North Elba. September.

Pileus nigricans; hymenium valde decurrens, pars decurrens lamellis carens.

Ceratiomyxa fruticulosa (Muell.) Macbr.

Decaying wood. Edwards, St Lawrence co. June. A yellow form occurs growing with the common white form and sometimes confluent with it.

Clitocybe multiceps tricholoma n. var.

Flesh of the pileus rather thin, taste mild; lamellae rounded behind, slightly adnexed, otherwise like the type. Holley, Orleans co. September. C. A. Mabie.

This variety, by the attachment of the lamellae, connects the species with the genus Tricholoma, to which at first sight it is likely to be

referred. The naked margin of the pileus and its close agreement in general characters with Clitocybe multiceps Pk. lead me to refer it to this species. Like it, it is edible but scarcely first quality.

Pileus tenuior, sapor mitis; lamellae adnexae.

Clitocybe dealbata sudorifica n. var.

Pileus whitish, not shining, sudorific when eaten freely. Otherwise like the typical form. Grassy ground. Saratoga Springs. November. F. G. Howland.

Pileus albidus, non nitens; sudorificus.

Mr F. G. Howland recently reported to me that the white washed mushroom, Clitocybe dealbata Sow. when eaten freely caused profuse perspiration. I, with others, had eaten sparingly of this mushroom several years ago without experiencing any ill effects. At my request he kindly sent me a good supply of the fresh mushrooms that I might try them myself. Eight caps of average size were fried slightly in butter with a little milk and flour added. These were eaten at supper time. In texture and flavor no fault could be found with them. In about half an hour perspiration began to appear on my forehead, and gradually spread over the whole body. It lasted about five hours. It was unaccompanied by any pain or distress of any kind. There seemed to be a slight acceleration of the pulse, an unusual catarrhal discharge from the nostrils, a little stimulation of the salivary glands and an occasional hiccup. At the end of five hours the perspiration ceased, I fell asleep and slept till morning when I arose feeling as well as usual. This peculiar action of the mushroom suggested the thought that possibly I had erroneously referred our mushroom to C. dealbata; that it must be some other closely related species for no record of such effects had been attributed to the white washed mushroom by those writers who have published it as edible. A careful comparison of our specimens with the published descriptions of the white washed mushrooms revealed no well-marked characters by which to separate them. In the color of the cap alone does there appear to be any available mark of distinction. This, in the white washed mushroom, is described as white and rather shining, or as one writer expresses it, "exceedingly like ivory." In our plant it is better described as whitish, or dull white, not at all shining. So close is the morphologic relationship that it appears to me to be better to separate the mushroom under con-

sideration as a mere variety of the white washed mushroom and not as a distinct species. I would not class it as an edible mushroom but rather as a medicinal one. Its physiologic effects apparently separate it more decidedly than any of its external characters.

Clitocybe morbifera Pk., collected by F. J. Braendle near Washington, D. C., is a closely related species. Its name was suggested by the fact that those eating it had been made sick. In the dried state it is scarcely distinguishable from our sudorific mushroom in external appearance, but its stem is hollow. When fresh its pileus is tinged with grayish brown, but it becomes paler in drying. This has also been collected near Minneapolis, Minn., whence it was sent by Mrs M. E. Whetstone with an account of a case of short illness caused by it in one who ate freely of it for breakfast. Dr O. E. Fisher has sent specimens of it from Detroit, Mich., with an account of the sickness it produces and the accompanying symptoms. From these cases it appears that the ill effects of the sickening mushroom are much more serious and uncomfortable than those of the sudorific mushroom.

Cornus canadensis elongata n. f.

Stem elongated, bearing a pair of opposite leaves at each of three or four nearly equidistant nodes, or bearing a whorl of four leaves near the base and two or three pairs of opposite leaves above, instead of the usual peduncle and flower cluster. Cranberry marsh, Sand Lake, Rensselaer co. and Averyville marsh, North Elba. July and September. Sterile.

This peculiar form has the appearance of Cornus suecica L., the northern dwarf cornel, but its leaves have the venation of the common dwarf cornel. No flowering or fruiting specimens were seen.

Crataegus grayana Eggleston

This rare thorn bush occurs in a single clump on Crown Point west of the ruins of Fort Frederick. At Rossie it is represented by several clumps near the Laidlaw house and a single outlying clump about two miles south of the village.

Cronartium ribicola F. de W.

Leaves of red currant, Ribes vulgare Lam. West Fort Ann. October, 1909. S. H. Burnham. This is an interesting discovery of a new locality for this fungus of which the uredo

form is the white pine rust Peridermium strobi Kleb., a pernicious pest destructive to young white pines. This station is far removed from the one originally discovered at Geneva. Fortunately it is apparently very scarce in this new locality. In neither instance was any white pine found to be affected by the rust. The question arises in each case. Whence came the spores that infected the currant leaves? Can the fungus perpetuate itself without the intervention of the white pine rust?

Daphne mezereum L.

This early spring flowering shrub is quite hardy and escaping from cultivation it becomes established in pastures and waste places. It is beautiful both in flower and in fruit. Fine specimens were contributed by Miss E. W. Mische and Mrs L. L. Goodrich. They were collected near Homer, Cortland co. and were so abundant on a hillside near the cemetery that they were cut with a scythe as if they were noxious weeds.

Euphorbia corollata L.

Sandy barrens near Bushnells Basin and Perinton, Monroe co. July and August. M. S. Baxter. This rare plant is apparently limited to the western part of the State.

Fuligo ovata (Schaeff.) Macbr.

This is one of our largest slime molds and one of the most variable in external color. A specimen found near Newport, Herkimer co. by G. S. Graves was 25 cm long, 20 cm broad and about 6 cm thick.

Glonium parvulum (Ger.) Sacc.

Decorticated wood. Orient Point. January. R. Latham. Rare.

Herpotrichia diffusa (Schw.) Ellis

In Sylloge this species stands under the name Herpotrichia rhodomphala (Berk.) Sacc. Under this name it was recorded in the Annual Report of the State Botanist for 1889, page 34. Specimens found at Orient Point in March by R. Latham have some of the perithecia wholly red, others partly so. They were growing on decaying wood of locust, Robinia pseudacacia L.

Hordeum trifurcatum Jacq.

Cultivated specimens from Medina were contributed by F. C. Stewart. It is cultivated under the name of beardless barley and is said to be very productive. It sometimes springs up spontaneously. Such specimens were erroneously reported under the name Hordeum hexastichon L.

Hydrastis canadensis L.

This valuable medicinal plant has become exceedingly rare in our State. It is therefore very gratifying to know that it still exists in Cayuga co., whence fruiting specimens were sent by E. L. Bradley.

Lecanora varia saepicola Fr.

On fence rails. Orient Point. April. R. Latham.

Lepidium draba L.

Waste ground in Syracuse near Onondaga creek. June. Mrs L. L. Goodrich. Collected by Miss Belle Douglass. This introduced plant was found many years ago near Astoria, Queens co. by Prof. D. C. Eaton, but that station for it has since been reported as destroyed.

Mycogone cervina subincarnata Pk.

In State Museum Report 32, page 44 this fungus was reported as a Sepedonium. It should be referred to the genus Mycogone and is a mere variety of Mycogone cervina Ditm. differing only in its smaller spores and more pinkish color. Its habitat is the same as that of the typical form. The spores are 20–28 μ long, 12–20 μ broad in the widest part. The upper cell is globose, verrucose, and much larger than the smooth lower cell.

Sporae subincarnatae, 20–28 x 12–20 μ.

Myxosporium castaneum quercus n. var.

Heaps slightly prominent, orbicular or oblong, erumpent through transverse chinks of the epidermis. Otherwise like the type.

Branches of chestnut oak, Quercus prinus L. Riverhead, Suffolk co. October. F. C. Stewart.

Acervuli minuti, orbiculares oblongive, per rimulas transversas in epidermide erumpentes.

Oidium destruens Pk.

This destructive parasitic fungus begins its work early in the season. Young leaves of the shad bush Amelanchier oblongifolia (T. & G.) Roem. were found near Albany affected by it the last week in April.

Parmelia borreri hypomela Tuck.

Bark of red cedar, Juniperus virginiana L. Orient Point. April. R. Latham.

Parmelia perforata hypotropa Nyl.

Bark of red cedar, Juniperus virginiana L. Orient Point. April. R. Latham.

Peronospora ficariae Tul.

Living leaves of buttercup, Ranunculus acris L. Menands. May.

Plantago media L.

Near Canandaigua. August. Miss E. C. Webster. This introduced plantain is rare. Its spikes resemble those of the English plantain but it is easily distinguished from that species by the broad, hoary pubescent leaves.

Polypodium vulgare L.

A singular small sterile fern which, on account of its venation has been referred to this species, was collected near Lake George and specimens were contributed by C. L. Williams and Mrs S. W. Russell.

The fronds are 5–12 cm long, 1–2 cm broad, sinuate lobed or irregularly pinnatifid, the lobes being broad, obtuse and unequal.

Ramalina calicaris fraxinea Fr.

Orient Point. November. R. Latham.

Roestelia aurantiaca Pk.

The orange colored rust occurs on various species of shad bush, Amelanchier, and of thorn bushes and trees, Crataegus. Also on quince trees. It attacks the leaves, fruit and sometimes the twigs. Its alternate form is Gymnosporangium clavipes

C. & P. which lives on red cedar, Juniperus virginiana L. and the common juniper, J. communis depressa Pursh. The spores of the Gymnosporangium are produced in spring and serve to infect species of shad bushes, thorn bushes and quince bushes or trees, but instead of reproducing the Gymnosporangium in them, they develop into the orange rust or Roestelia, whose spores are carried back to the red cedar or common juniper and produce in them the Gymnosporangium. The Roestelia frequently causes great loss to quince growers by attacking the young quinces and rendering them worthless. Fine specimens of it were contributed by Messrs J. A. Thomson, D. B. VanBuren, and G. G. Atwood. Quince fruits from 1–1.5 inches in diameter were practically covered by the cups of the fungus filled with their orange colored spores. In some cases even the twigs bearing the fruit had been invaded and were swollen by the fungus. This rust appears to have been unusually abundant the past season, in the western part of the State. Mr D. B. Van Buren found quince orchards there badly infested by it, even in localities where no red cedar trees were known to exist within many miles. This would indicate that the orange rust has some way of reproducing itself without the intervention of the red cedar or that some unnoticed juniper trees may exist in the vicinity of these orchards and furnish the Gymnosporangium spores. Experiments should be made by which the fact can be ascertained if the orange rust can reproduce itself in the quince either the same or the following year. Also if the mycelium may live in the twigs during the winter and renew the development of the rust in the leaves and fruit developing from the infested twigs.

Sagina decumbens (Ell.) T. & G.

Orient Point. June. R. Latham. This is a rare and delicate little plant.

Scirpus occidentalis (Wats.) Chase

Canandaigua. August. Miss E. C. Webster. The longer spikes separate this species from its near relative Scirpus validus Vahl. The plant previously reported under this name proves to be a mere form of S. validus Vahl.

Sphaerotheca humuli (DC.) Burr.

Living leaves and aments of hop vines. Middleburg, Schoharie co. G. G. Atwood. The fungus attacks the leaves, diminishing their vigor; also the aments or fruit, arresting their proper development and causing partial or sometimes serious failure of the crop.

Sporobolus cryptandrus (Torr.) Gray

Sandy soil. Webster, Monroe co. September. J. Dunbar. Orient Point. September. R. Latham. Not common.

Thaspium barbinode (Mx.) Nutt.

Rocky places near Corning. May. Rare or wanting in the eastern part of the State.

Theloschistes concolor effusus Tuck.

On bark of trees. Orient Point. January. R. Latham.

Valsonectria parasitica (Murrill) Rehm

Bark of chestnut, Castanea dentata (Marsh.) Borkh. Marlboro, Ulster co. July.

This fungus was described under the name Diaporthe parasitica, but it does not well agree with the character of that genus, inasmuch as it has a bright colored perithecium instead of a black one. It agrees much better in this respect with the genus Valsonectria. The locality here mentioned is the most northern, with one exception, of any known to me. It is also the first one in which I have seen a tree affected by this fungus, though I have looked for it for three seasons whenever I have been where chestnut trees are common. Specimens have been seen that were collected at Visher Ferry, Saratoga co. This is the most northern station for it known to me. It has been reported to have been found at Cooperstown but no specimens from that locality have been seen by me.

Viburnum dentatum L.

A form with leaves decidedly acuminate was found at Orient Point in July by R. Latham.

Vicia angustifolia segetalis (Thuill.) Koch

Orient Point. July. R. Latham.

Viola pallens (Banks) Brainerd

In woods. Edwards. May. This violet was formerly confused with Viola blanda Willd. It is separated from it by the dull reddish spots of the petioles and scapes, the bearded lateral petals and the broader upper petals. In our specimens the capsules are subglobose and about twice as long as the sagittate sepals.

NEW SPECIES AND VARIETIES OF EXTRALIMITAL FUNGI

Agaricus floridanus

Pileus hemispheric or campanulate, becoming nearly plane, rimosely areolate or slightly strigose, becoming glabrous, whitish with a yellow or yellowish center; lamellae at first white, then pink, finally dark brown or blackish; stem easily separable from the pileus, equal or slightly thickened at the base, solid, becoming fibrous when old, whitish, annulus small; spores globose or broadly elliptic, 5–6 μ long, 4–5 μ broad.

Pileus 9–15 cm broad; stem 5–10 cm long, 1.5–3 cm thick.

Single or subcespitose. Grassy fields of sandy soil. DeFuniak Springs, Florida. March. G. Clyde Fisher.

The mycelium often binds the particles of sand into a globose mass which adheres to the base of the stem. This gives the stem a bulbous appearance, though it is not strictly bulbous. This species is apparently closely allied to Agaricus campester americanus Speg. a South American species. It may be separated from that variety by its rimosely areolate pileus, its stem easily separating from the pileus, solid and not bulbous, and by its smaller annulus. The spores are the same size in both and smaller than in the common mushroom. In both the lamellae are at first white.

Pileus hemisphericus campanulatusve, deinde subplanus, rimose areolatus substrigosus, demum glaber, albidus, in centro luteus vel flavidus; lamellae primo albae, deinde incarnatae, postremo atro-brunneae vel nigricantes; stipes ex pileo facile separabilis, aequalis vel basi subincrassatus, solidus, in senectute fibrosus, albidus, annulus parvus; sporae globosae vel late ellipsoideae, 5–6 x .4–5 μ.

Boletus gertrudiae

Pileus fleshy, broadly convex, glabrous, soft, dry or nearly so, orange yellow or brownish yellow, rarely bright yellow, flesh white, unchangeable; tubes long, bright yellow when young, brownish yellow when mature, adnate or but slightly rounded at the stem, the mouths minute; stem rather long, equal or nearly so, solid, glabrous, yellow above, white below, white within or sometimes more or less yellow within the upper part; spores oblong fusiform, 15–20 μ long, 5–6 μ broad.

Pileus 5–12 cm broad; stem 10–15 cm long, 12–24 mm thick.

Ground in woods. Old Lyme, Connecticut. August. H. L. Wells.

This is a fine large species with a beautifully colored stem, the upper half usually bright yellow, the lower half white. The two colors sometimes blend into each other and sometimes are quite definitely terminated. They grow scattered but sometimes two with stems united at the base. The pileus is apt to be badly infested by insect larvae. This species may well commemorate Miss Gertrude Wells who, though young in years, has already manifested a remarkable interest in mushrooms and a wonderful proficiency in the knowledge of them.

Pileus carneus, late convexus, glaber, mollis, siccus, aurantiaco-luteus vel brunneo-luteus, rare flavidus, carne alba, immutabile; tubuli longi, primus flavidi, deinde fulvo-ochraecei, adnati vel circum stipitem leviter depressi, pori minuti; stipes longus, subaequalis, solidus, glaber, supra flavidus, infra albus, carne intra alba, vel supra flavida; sporae oblongae vel fusiformes, 15–20 x 5–6 μ.

Cercospora verbenae-strictae

Spots numerous, small, angular, yellowish green; hyphae hypophyllous, tufted, short, simple, slightly colored, 20–40 μ long, 4–5 μ broad; spores slender, commonly tapering upward, obscurely 3–6-septate, hyaline, 20–100 μ long, 3–4 μ broad.

Lower surface of living or languishing leaves of Verbena stricta Vent. Stockton, Kansas. August. E. Bartholomew and W. T. Swingle.

Maculae numerosae, parvae, angulares, luteo-virides; hyphae hypophyllae, caespitosae, breves, simplices, leviter coloratae, 20–40 x 4–5 μ; sporae graciles, vulgo sursum attenuatae, obscure 3–6-septatae, hyalinae, 20–100 x 3–4 μ.

Clitocybe subnigricans

Pileus fleshy in the center, thin toward the margin, convex becoming nearly plane, glabrous, whitish or smoky white, flesh whitish, slowly changing to grayish on exposure to the air, taste slightly and tardily acrid, odor earthy, slightly pungent and disagreeable, persistent, lamellae thin, narrow, close, slightly or in some specimens very much decurrent, whitish becoming blackish where bruised and in drying; stem solid, slightly fibrous striate, somewhat thickened or distinctly bulbous at the base, colored like

the pileus but becoming blackish in drying; spores white, 6–7 μ long, 4–6 μ broad.

Pileus 2.5–5 cm broad; stem 4–7.5 cm long, 6–12 mm thick.

Subcespitose or gregarious. Rye Beach, New Hampshire. G. B. Fessenden.

A fine species easily distinguished by its strong odor and the blackening of the lamellae and stem where bruised and in drying.

Pileus carneus, ad marginem tenuis, convexus, demum subplanus, glaber, albidus vel fumoso-albus, caro albida, vulnera ad griseum tarde mutantia, sapor leviter et tarde acris, odor terrenus, ingratus, persistens; lamellae tenues, angustae, confertae, leviter vel valde decurrentes, albidae, ubi vulneratae nigricantes et in siccitate; stipes solidus, leviter fibroso-striatus, basi incrassatus vel bulbosus, albidus, in siccitate nigricans; sporae albae, 6–7 x 4–6 μ.

Clitopilus washingtoniensis Braend. in lit.

Pileus thin, broadly convex, nearly plane or centrally depressed, sometimes undulate on the margin, glabrous, at first bluish, soon pale purple or mauve, flesh white, taste mild; lamellae narrow, close, decurrent, slightly tinged with pink; stem short, central, eccentric or almost lateral, equal or tapering downward, fibrillose and longitudinally rimulose, solid, brownish; spores elliptic, 6–7 μ long, 4–5 μ broad.

Pileus 1.6–2.5 cm broad; stem 1–2 cm long, 2–4 mm thick.

Gregarious or cespitose. Washington, D. C. June. F. J. Braendle.

Remarkable for the peculiar colors of the pileus and for its variable attachment to the stem.

Pileus tenuis, late convexus subplanus vel in centro depressus, glaber, aliquando margine undatus, primus subcaeruleus deinde pallide purpureus, carne alba, sapore miti; lamellae angustae, confertae, decurrentes, subincarnatae; stipes brevis, centralis, eccentricus vel sublateralis, aequalis vel infra attenuatus, fibrillosus, in longum rimulosus, solidus, brunneus; sporae ellipsoideae, 6–7 x 4–5 μ.

Coniothecium perplexum

Effused, forming a thin black crust; hyphae inconspicuous, short, continuous, creeping, colored, 3–4 μ in diameter; spores minute, subglobose or irregular, colored, 4–6 μ in diameter, persistently adhering and forming subglobose, irregular or oblong opaque masses, 20–40 μ in diameter or 20–35 μ long, 40–60 μ broad.

Decaying wood of ash posts below the surface of the ground. Stockton, Kansas. December. E. Bartholomew.

Effusum, stratum tenue nigrum formans; hyphae inconspicuae, breves, continuae, repentes, fuscae, 3–4 μ trassae; sporae minutae, subglobosae vel irregulares, fuscae, 4–6 μ in diam., persistenter adherentes, acervulosque subglobosos, irregulares vel oblongos nigricantes formantes, 20–40 μ in diam. vel 20–35 x 40–60 μ.

Cylindrosporium conservans

Spots numerous, amphigenous, suborbicular, sometimes confluent, 1–3 mm broad, green; acervuli epiphyllous, commonly 1–6 on a spot; spores filiform, curved, 40–75 μ long, 3–4 μ broad, oozing out and forming persistent whitish or honey colored masses or tendrils.

Leaves of Scouler's willow, Salix scouleriana Barr Rolling Bay, Washington. August. E. Bartholomew.

The spots are surrounded by the yellow or greenish yellow tissue of the leaves, the fungus apparently preventing the discoloration of the tissues in proximity to it. This character is suggestive of the specific name. The center of the spots appears paler on the upper surface because of the spore masses.

Maculae numerosae, amphigenae, suborbiculares, aliquando confluentes, 1–3 mm latae, virides; acervuli epiphylli, vulgo 1–6 in quavis macula; sporae filiformes, 40–75 x 3–4 μ, curvatae, exundantes et massas aut claviculas persistentes albidas melleasve formantes.

Diaporthe callicarpae

Stroma effused, thin, blackening the surface of the wood; perithecia immersed in the wood, commonly 2–6, depressed-globose, .3–.5 mm broad, black, ostiola minute, barely emerging from the blackened surface of the wood and rupturing the epidermis; asci very slender, narrowed at each end, 60–80 μ long, 6–8 μ broad, spores distichous, 4-nucleate, 12–15 μ long, 3–4 μ broad.

Dead stems of Sambucus callicarpa Greene. Rolling Bay, Washington. August. E. Bartholomew.

This species belongs to the section Euporthe. The spores and asci are very slender and the septum of the former is scarcely perceptible.

Stroma effusum, tenue, ligni superficiem nigricans; perithecia in ligno immersa, vulgo 2–6, depresso-globosa, .3–.5 mm lata, nigra,

ostiola minuta ligni superficiem vix superantia; asci graciles, utrinque attenuati, 60–80 x 6–8 μ; sporae distichae, 4-nucleatae, 12–15 x 3–4 μ.

Diplodia alni-rubrae

Perithecia densely gregarious, sunk in the bark, covered by the slightly elevated epidermis, .3–.5 μ broad; spores ellipsoid or broadly ellipsoid, oozing out and staining the matrix black, 16–20 μ long, 10–14 μ broad.

Rolling Bay, Washington. August. E. Bartholomew.

The dead bark of Alnus rubra Bong. Closely related to Diplodia alni Fckl., but with shorter and broader spores which emerge and stain the matrix black.

Perithecia dense gregaria, in cortice insculpta, epidermide leviter elevata tecta, .3–.5 μ lata; sporae ellipsoideae vel late ellipsoidae, exudantes matricemque inquinantes, 16–20 x 10–14 μ.

Flammula graveolens

Pileus fleshy, broadly convex or nearly plane, sometimes slightly depressed in the center, viscid, glabrous or very obscurely innately fibrillose, reddish brown or yellowish brown, at first paler on the margin, the thin pellicle subseparable, flesh pale yellow, odor strong, earthy; lamellae thin, moderately close, adnate or slightly decurrent, pale yellow becoming subferruginous; stem equal or tapering at the base, solid or with a very narrow cavity, silky fibrillose, pale yellow without and within, becoming brownish at the base, veil floccose or webby, pale yellow, visible in the young plant, soon disappearing; spores brownish ferruginous, elliptic, 6–8 μ long, 4–5 μ broad.

Pileus 2.5–7 cm broad; stem 5–7 cm long, 5–10 mm thick.

Under pine trees. West Gloucester, Massachusetts. October. Mrs E. B. Blackford.

A species well marked by its pale yellow flesh veil and stem, its viscid pileus, brownish ferruginous spores and strong odor. It is sometimes cespitose.

Pileus carneus, late convexus vel subplanus, aliquando in centro depressus, viscidus, glaber aut obscure fibrillosus, rufo-brunneus vel flavo-brunneus, primus margine pallidior, pellicula tenue subseparabile, carne flavida, odore grave, terraneo; lamellae tenues subconfertae, adnatae, vel subdecurrentes, flavidae, deinde subferrugineae; stipes aequalis vel basi attenuatus, solidus vel leviter cavus,

sericeo-fibrillosus, extra intraque flavidus, demum basi brunneus, velum floccosum arachnoideumve, flavidum, evanescens; sporae brunneo-ferruginosae, ellipsoideae, 6–8 x 4–5 μ.

Hebeloma flexuosipes

Pileus thin, convex, glabrous, slightly viscid when moist, dingy buff or clay brown, flesh white; lamellae close, adnate, brownish ferruginous; stem fibrous, equal or slightly thickened at the base, flexuous, solid or stuffed, pruinose-pubescent and minutely glandular at the top, pallid or similar to the pileus in color, with an abundant white fibrillose mycelium at the base, veil none; spores subellipsoid, brownish ferruginous, 12–16 μ long, 7–9 μ broad.

Pileus 2.5–6 cm broad; stem 3.5–7.5 cm long, 4–8 mm thick.

Ground. Schenley park, Pittsburg, Pennsylvania. July. D. R. Sumstine. Said to be edible.

Pileus tenuis, convexus, glaber, viscidulus, luteolus vel argillaceo-brunneus, carne alba; lamellae confertae, adnatae, brunneo-ferrugineae; stipes fibrosus aequalis vel leviter basi incrassatus, flexuosus, solidus farctusve, ad apicem pruinoso-pubescens et minute glandulosus, pallidus vel pileo in colore similis, velo nullo, mycelio fibrilloso, abundante, candido; sporae subellipsoideae, brunneo-ferruginosae, 12–16 x 7–9 μ.

Helminthosporium subapiculatum

Tufts effused, black; hyphae erect, rigid, subflexuous, often nodulose and irregular above, obscurely septate, variable in length, 8–10 μ thick; spores variable, oblong or subfusiform, 6–7-septate, 35–80 μ long, 12–16 μ broad.

Dead wood of Sambucus callicarpa Greene. Rolling Bay, Washington. August. E. Bartholomew.

It is related to Helminthosporium apiculatum Cd. but differs in its longer oblong spores without an apiculus.

Caespites effusi, atri; hyphae erectae, rigidae, subflexuosae, saepe superne nodulosae et irregulares, obscure septatae, 8–10 μ crassae; sporae variables, oblongae vel subfusiformes, 6–7-septatae, 35–80 x 12–16 μ.

Hormiscium ambrosiae

Tufts commonly effused, black; chains of spores persistent, straight or slightly curved, commonly tapering toward the apex or broader in the middle and tapering toward each end, 40–100 μ long;

spores subglobose, commonly broader than long, colored, smooth, 4–16 in a chain, 6–10 μ long, 8–18 μ broad.

On dead stems of Ambrosia trifida L. Louisville, Kansas. September. E. Bartholomew.

Caespites vulgo effusi, atri; catenae sporarum simplices persistentes, rectae vel leviter curvatae, vulgo ad apicem attenuatae vel in parte media latiores utrinque angustatae, 40–100 μ longae; sporae subglobosae, leves, fuscae, 4–16 in quavis catena, 6–10 x 8–18 μ.

Hypoxylon bartholomaei

Stroma effused, thin, about 1 mm thick, 2–3 cm long, .5–1 cm broad, subelliptic, sometimes with a slight narrow sterile black margin, even, black, opaque; perithecia monostichous, subglobose, .5 mm broad, the ostiola scarcely visible; asci cylindric, 160–200 μ long, 8–12 μ broad; spores monostichous, ellipsoid, at first pale and 1–2-nucleate, then colored, 16–24 μ long, 8–12 μ broad; paraphyses filiform.

On decorticated wood of red alder, Alnus rubra Bong. Rolling Bay, Washington. August. E. Bartholomew.

The distinguishing characters of this species are the thin subelliptic stroma and its dull even black surface. The ostiola are not visible to the naked eye. The young conidial state not seen.

Stroma effusum, tenue, circiter 1 mm thick, 2–3 cm longum, .5–1 cm latum, subellipticum, leve, atrum, opacum; perithecia monosticha, subglobosa, .5 mm lata, ostiola vix visibilia; asci cylindracei, 160–200 x 8–12 μ; sporae monostichae, ellipsoideae, primo pallidae, uninucleatae vel binucleatae, deinde coloratae, 16–24 x 8–12 μ; paraphyses filiformes.

Lepiota allenae

Pileus thin, conic, convex or campanulate, widely striate on the margin, unpolished, whitish or tinged with pale yellow, often yellowish brown in the center; lamellae thin, 1–2 mm broad, free, close, whitish or tinged with pale yellow; stem slightly tapering upward, glabrous, hollow, colored like the pileus, the annulus slight, persistent or evanescent; spores broadly ellipsoid or subglobose, 5–7 μ long, 4–6 μ broad.

Pileus 8–15 mm broad; stem 12–20 mm long, 1–2 mm thick.

Cespitose. In a greenhouse. Newtonville, Massachusetts. August. Miss L. C. Allen.

This is a small delicate, beautiful, and nearly uniformly colored species. The small smooth disk is sometimes brown or yellowish brown and in very young plants looks like a cap on the apex of the small undeveloped pileus. It may possibly be an introduced species. It is respectfully dedicated to its discoverer.

Pileus tenuis, conicus, convexus campanulatusve, margine late striatus, impolitus, albidus flavidusve, saepe in centro flavido-brunneus; lamellae tenues, 1–2 mm latae, liberae, confertae, albidae flavidaeve; stipes supra leviter attenuatus, glaber, cavus, pileo in colore similis, annulus parvus, persistens vel evanescens; sporae late ellipsoideae, vel subglobosae, 5–7 x 4–6 μ.

Leptonia longistriata

Pileus conic or convex, submembranous, fragile, umbilicate, subhygrophanous, squamulose, striatulate nearly or quite to the umbilicus both when moist and when dry, grayish brown; lamellae thin, fragile, subdistant, eroded or wavy on the edge, whitish becoming flesh color; stem straight, slender, tough, glabrous, shining when dry, hollow, colored like the pileus with a white mycelium at the base; spores irregular or angular, uninucleate, 12–16 μ long, 8–10 μ broad.

Pileus 1–1.5 cm broad; stem 3–5 cm long, 1–2 mm thick.

Ground by roadsides. Stow, Massachusetts. August. S. Davis.

The distinguishing character of this species is the widely striated margin which is suggestive of the specific name.

Pileus conicus convexusve, submembranaceus, fragilis, umbilicatus, subhygrophanus, squamulosus, fere ad umbilicum striatulatus, griseo-brunneus; lamellae tenues, fragiles, subdistantes, acie erosae undulataeve, albidae deinde incarnatae; stipes strictus, gracilis, lentus, glaber, in siccitate nitens, cavus, in colore pileo similis, basi mycelio albido; sporae irregulares angularesve, uninucleatae, 12–16 x 8–10 μ.

Leptonia strictipes

Pileus thin, campanulate or convex, obtuse or slightly umbilicate, even or striatulate on the thin margin, yellow brown or dark brown; lamellae thin, narrow, close, adnate or slightly sinuate with a decurrent tooth, dusted and subincarnate by the spores; stem long, slender, straight, glabrous, hollow, equal or slightly tapering upward, with a whitish mycelium at the base; spores angular, uninucleate, commonly with an oblique apiculus at one end, 10–14 μ long, 7–9 μ broad.

Pileus 1.5–2.5 cm broad; stem 6–8 cm long; 2–3 mm thick.

Among sphagnum. Taylor's swamp, Stow, Massachusetts August. S. Davis.

Known by its variously colored pileus and long straight stem. It is a larger species than Leptonia longistriata Pk. to which it is closely related, and has a different habit and habitat and smaller spores.

Pileus tenuis, campanulatus convexusve, obtusus vel leviter umbilicatus margine tenue levis striatulatusve, flavo-brunneus vel nigro-brunneus; lamellae tenues, angustae, confertae, adnatae vel leviter sinuatae dente decurrente; sporis pulverulentae, subincarnatae; stipes longus, gracilis, rectus, glaber, cavus, aequalis vel sursum leviter attenuatus, basi mycelio albido; sporae angulares, uninucleatae, vulgo oblique apiculatae, 10–14 x 7–9 μ.

Macrophoma suspecta

Perithecia minute, 120–160 μ broad, gregarious or scattered, occupying large areas on the upper surface of the lower leaves, at first covered by the epidermis, then erumpent, thin, convex, orbicular, opening by a pore, black; spores oblong or cylindric, obtuse, hyaline, continuous, 2–4-nucleate, 12–18 μ long, 4–5 μ broad.

Dead basal leaves of winter wheat, Triticum vulgare Vill. Lexington, Kentucky. May and June. H. Garman.

Related to Phoma hennebergii J. Kuehn but differing in its place of growth and in its broader spores and perithecia. It is suspected of killing the host plant, hence the specific name. This is very distinct from Colletotrichum cereale Manns, which is parasitic on wheat, rye, oats, barley and various grasses in Ohio.

This species is a good illustration of the difficulty sometimes encountered in assigning definite limits to a genus. The genus Macrophoma was first suggested by Professor Saccardo as one that might be instituted for the reception of species of Phoma having rather thick perithecia and spores. Berlese and Voglino, acting on this suggestion, instituted the genus Macrophoma and included in it species whose spores should equal 15 μ or more in length. The spores in the species here described vary in length from 12–18μ. It therefore stands on the border line between Phoma and Macrophoma and so far as this character goes might be placed in either genus. Because some of the spores exceed the limiting dimension we have placed the species in Macrophoma.

thought it might be possible to find an occasional perithecium in which no spores would be 15 μ long.

Perithecia minuta, 120–160 μ in diam., gregaria sparsave, foliorum basalium areas magnas occupantia, primum epidermide tecta, tenua, convexa, orbicularia, poro aperientia, atra; sporae oblongae vel cylindraceae, utrinque rotundatae, hyalinae, continuae, 2–4-nucleatae, 12–18 x 4–5 μ.

Microdiplodia viciae

Perithecia hypophyllous, sometimes amphigenous, thin, covered by the epidermis, erumpent, black, 80–120 μ in diameter; spores at first hyaline, then colored, ellipsoid or oblong, 8–12 μ long, 4–5 μ broad, not at all or but slightly constricted at the septum.

Dead leaves of linear leaved vetch, Vicia linearis (Nutt.) Greene. Stockton, Kansas. May. E. Bartholomew.

The spores are similar in size and shape to those of Microdiplodia mori Allesch., but the habitat is so distinct it is scarcely probable that the two can be the same.

Perithecia hypophylla, aliquando amphigena, tenua, epidermide tecta, erumpentia, nigra, 80–120 μ in diam.; sporae primo hyalinae, demum fuscae, ellipsoideae oblongaeve, 8–12 x 4–5 μ, non aut vix constrictae ad septum.

Nolanea howellii

Pileus thin, conic or convex, minutely tomentulose, intensely blue; lamellae broad, adnate, subdistant, pale yellow or straw color, becoming flesh color; stem slender, equal, hollow, glabrous, but covered with white silky fibrils at the base, colored like the pileus; spores oblong or subglobose, angular, with an oblique apiculus at the base, 10–12 μ long, 7–8 μ broad.

Pileus 1–2 cm broad; stem 4–6 cm long, 1–2 mm thick.

Among fallen leaves in damp places in thick woods. Rockville, Indiana. September. G. T. Howell.

Colored much like Nolanea atrocyanea Clem. but a much larger species. From N. caelestina Fr. it scarcely differs except in the yellowish color of the young lamellae, the uniform deep blue color of the pileus and the longer stem with white silky fibrils at the base. Respectfully dedicated to its discoverer.

Pileus tenuis, conicus convexusve, minute tomentosulus, intense caeruleus; lamellae latae, adnatae, subdistantes, stramineae, deinde incarnatae; stipes gracilis, aequalis, cavus, glaber, basi fibrillis albis

sericeis tectus, pileo in colore similis; sporae oblongae subglobosaeve, angulares, oblique apiculatae, 10–12 x 7–8 μ.

Ombrophila thujina

Cups minute, .5–.75 mm broad, scattered or subcespitose, sessile or subsessile; hymenium plane or convex, not or scarcely margined, pale orange; asci oblong or subclavate, 90–100 μ long, 15–20 μ broad; spores crowded or distichous in the asci, oblong or subfusiform, rounded at the ends, hyaline, 18–22 μ long, 6–8 μ broad; paraphyses filiform, free at the tips.

Smooth bark of the branches of white cedar, Thuja occidentalis L. Near London, Ontario. J. Dearness.

This differs from Ombrophila enterochroma (Pk.) Sacc. in being less distinctly stipitate or sessile, in retaining its color in drying, in its less fusiform spores and in the free, not agglutinate, apices of its asci and paraphyses.

Ascomata minuta, .5–.75 mm lata, sparsa vel subcaespitosa, sessilia vel subsessilia; hymenium planum vel convexum, submarginatum, pallide aurantiacum; asci oblongi vel subclavati, 90–100 x 15–20 μ; sporae in ascis confertae vel subdistchae, oblongae vel subfusiformes, utrinque rotundae, hyalinae, 18–22 x 6–8 μ; paraphyses filiformes, apicibus liberis.

Ovularia stachydis-ciliatae

Spots angular, 2–5 mm broad, limited by the veinlets, subconfluent, pale yellowish green, sometimes becoming brownish or reddish brown; hyphae hypophyllous, very short, hyaline; spores very variable, globose, obovate or ellipsoid, hyaline, 6–16 μ long, 6–12 μ broad.

Living leaves of Stachys ciliata Dougl. Alki Point, Washington. August. E. Bartholomew.

The hyphae and spores form a thin inconspicuous grayish covering on the spots beneath.

Maculae angulares, 2–5 mm latae, venulis limitatae, subconfluentes, pallide flavo-virides, aliquando brunnescentes vel rufobrunneae; hyphae hypophyllae, brevissimae, hyalinae; sporae variabiles, globosae, obovatae vel ellipsoideae, hyalinae, 6–16 x 6–12 μ.

Phyllosticta paupercula

Spots very small, .5–1 mm broad, numerous, sometimes confluent, angular or suborbicular, reddish brown or whitish, scarcely

visible on the lower surface of the leaf; perithecia minute, epiphyllous, one or two on a spot, black; spores ellipsoid, 4–6 μ long, 3-3.5 μ broad.

Living leaves of cultivated Amelanchier alnifolia Nutt. Stockton, Kansas. September. E. Bartholomew.

Closely related to Phyllosticta prunicola (Op.) Sacc., P. mahaleb Thuem. and P. mespili Sacc. but easily distinguished by the peculiarly colored and very small spots and by the small number of the perithecia on a spot.

Maculae minutae, .5–1 mm latae, numerosae quandoque confluentes, angulares aut suborbiculares, rufo-brunneae vel albidae, infra vix visibiles; perithecia minuta, epiphylla, in aliqua macula unum duove, atra; sporae ellipsoideae, 4–6 x 3–3.5 μ.

Russula eccentrica

Pileus fleshy but thin, firm, eccentric or deformed, at first centrally depressed, with even incurved margin, becoming nearly plane, dry, glabrous, brownish or brownish gray, faintly reddish brown when dry, flesh white, odor disagreeable; lamellae thin, subdistant, broad, adnate or adnexed, pallid or tinged with pink, becoming reddish where wounded, reddish brown and subpruinose with age or in drying; stem smooth, equal, spongy within, white; spores subglobose, even or nearly so, 6–7 μ in diameter.

Pileus 5–10 cm broad; stem 4–6 cm long, 1.5–3 cm thick.

Grassy ravine in open oak woods. Near St Louis, Missouri. August. Rare and local. N. M. Glatfelter.

This is the third species known in which wounds assume a reddish color. From Russula nigricans (Bull.) Fr. it differs in its dry and eccentric pileus not becoming blackish and from R. densifolia Secr. in its eccentric pileus and subdistant pinkish tinted lamellae. It belongs to the section Compactae.

Pileus carneus, tenuis, firmus, eccentricus vel deformatus, primus centro depressus, margine leve incurvato, deinde subplanus, siccus, glaber, brunneus vel brunneo-griseus, siccitate leviter rufo-brunneus, carne alba, odore ingrato; lamellae tenues, subdistantes, latae, adnatae vel adnexae, pallidae vel subincarnatae, rufescentes ubi vulneratae, in aetate vel siccitate rufo-brunneae et subpruinosae; stipes aequalis, levis, intus spongiosus, albus; sporae subglobosae, subleves, 6–7 μ in diam.

Septoria aceris-macrophylli

Spots distinct, orbicular, 3–8 mm broad, amphigenous, pale reddish, slightly paler in the center; perithecia minute, 1/6 mm broad, on the upper surface of the leaf, central, few, black; spores filiform, curved, 20–40 μ long, 1.5–2 μ broad.

Living leaves of Acer macrophyllum Pursh. Port Madison, Washington. August. E. Bartholomew.

Maculae distinctae, suborbiculares, 3–8 mm latae, amphigenae, pallide rufescentes, centro leviter pallidiores; perithecia minuta, 1/6 mm lata, in pagina folii superiore, centralia, pauca, nigra: sporae filiformes, curvae, 20–40 x 1.5–2 μ.

Septoria angustissima

Spots amphigenous, .5–1.5 cm broad, sometimes confluent and occupying half the leaf or more, reddish brown above, paler beneath, not brown margined; perithecia mostly epiphyllous, densely gregarious, orbicular, about .5 mm broad, depressed or broadly conic, opening by a central pore, black; spores filiform, extremely slender, curved or straight, continuous, eguttulate, hyaline, 18–30 μ long, scarcely 1 μ broad; sporophores shorter and thicker.

On leaves of osage orange, Maclura pomifera (Raf.) Schneider. Aberdeen, Mississippi. August. F. D. Kern. Collected by T. C. Frye.

Remarkable for its very narrow spores.

Maculae amphigenae, .5–1.5 cm latae, aliquando confluentes foliique partem dimidian occupantes, supra rufo-brunneae, infra pallidiores; perithecia vulgo epiphylla, dense gregaria, orbicularia depressa vel late conica, poro aperientia, nigra; sporae filiformes, pergraciles, curvatae rectaeve, hyalinae, eguttulatae, 18–30 x 1 μ; sporophori breviores et crassiores.

Septoria ficarioides

Spots amphigenous, suborbicular, usually only one or two on a leaf, pallid; perithecia few, epiphyllous, 100–150 μ in diameter, black; spores filiform, straight or slightly curved, hyaline, 25–40 long, 1–2 μ broad.

Leaves of Ranunculus cymbalaria Pursh. Wood River, Nebraska. July. E. Bartholomew. Collected by J. M. Bates.

Closely related to Septoria ficariae Desm. but differing in the color of its spots and in its larger and black perithecia, fewer on a spot, and in its different host plant.

Maculae amphigenae, suborbiculares, in folio quoque vulgo unus vel duo, pallidae; perithecia, pauca, epiphylla, 100–150 μ in diam., atra; sporae filiformes, rectae vel curvulae, hyalinae, 25–40 x 1–2 μ.

Septoria samarae

Perithecia minute, 80–120 μ in diameter, numerous, amphigenous, occupying the whole wing of the fruit, superficial, black; spores filiform, curved or rarely flexuous, hyaline, 22–44 μ long, 1.5–2 broad.

Wing of the fruit of box elder, Acer negundo L. and the dwarf mountain maple, Acer glabrum Torr. Morrison, Colorado. September. E. Bartholomew. Collected by E. Bethel. Golden, Colorado. E. Bethel.

The wings have lost their green color, but the covering of the seed is still green.

Perithecia minuta, 80–120 μ in diam., numerosa, amphigena omnino fructus alam occupantia, superficialia, atra; sporae filiformes curvatae vel rare flexuosae hyalinae 22–44 x 1.5–2 μ.

Sphaeromyces delphinii

Subiculum of few radiating branched colored hyphae; sporophores short, very dense; spores catenulate, oblong or subfusiform, forming a dense subglobose brown or black mass, subhyaline by transmitted light, 8–12 μ long, 1.5–2 μ broad.

Dead stems of western larkspur, Delphinium occidentale Wats. August. Salt Lake co., Utah. E. Bartholomew. Collected by A. O. Garrett.

In the spore character this species does not agree well with the character of the genus to which it is here referred, but it seems better to place it here than to make a new genus for its reception. Both it and the species on which the genus was founded are manifestly very rare. In some of the specimens the sporodochium appears to sit upon a gelatinous film which at length becomes blackened by a layer of the fallen spores.

Subiculum hyphis paucis, radiantibus, fuscis, sparse ramosis compositum; sporophori breves, densissimi; sporae catenulatae oblongae vel subfusiformes, massam subglobosam densam fuscam nigramve formantes, subhyalinae sub lente, 8–12 x 1.5–2 μ.

Sphaeropsis melanconioides

Perithecia membranous, orbicular or discoid, 1–2 mm broad, wanting or scarcely developed above, numerous, nestling in the bark to which it is adnate at the base, erumpent, black; spores compact, ellipsoid or oblong, 16–24 long, 10–12 μ broad, supported on more or less slender filiform hyaline sporophores.

Dead branches of Ailanthus glandulosus Desf. Stockton, Kansas. September. E. Bartholomew.

The perithecia are so imperfectly developed that the fungus might easily be mistaken for a species of Melanconium. Hence the specific name.

Perithecia membranacea, orbicularia discoideave, 1–2 mm lata, parte superiore carentia, numerosa, in cortice nidulantia, basi adnata, erumpentia, atra; sporae compactae, ellipsoideae oblongaeve, 16–24 x 10–12 μ, sporophoris hyalinis gracilibus vel filiformibus suffultae.

Sporotrichum chryseum

Hyphae slender, 3–4 μ thick, continuous, long, intricate, hyaline, forming a soft thin subrosy separable membrane, golden yellow beneath; spores abundant, minute, globose, 2.5–3 μ in diameter.

On the hymenium of a resupinate form of Fomes conchatus (Pers.) Fr. Bloomington, Indiana. J. M. VanHook.

The spores appear to give the yellow color to the under surface.

Hyphae graciles, 3–4 μ crassae, continuae, longae, intricatae, hyalinae, membranam mollen tenuem subroseam separabilem subter aureum formanies; sporae abundantes, minutae, globosae, 2.5–3 μ in diam.

Basidiophora kellermanii paupercula

Spots few, small, more scattered, snowy white; oospores globose, smaller, 20–24 μ in diameter.

Living leaves of Iva xanthifolia Nutt. Chama, New Mexico. August. E. Bartholomew. Collected by W. T. Swingle.

Maculae paucae, parvae, sparsiores, candidae; oosporae globosae, minores, 20–24 μ in diam.

Boletus chrysenteron sphagnorum

Pileus hemispheric or very convex, reddish brown, the extreme margin thin, slightly surpassing the hymenium, incurved, flesh white or whitish; tubes longer than the thickness of the flesh.

Pileus 2–3 cm broad; stem 2–4 cm long, 5–8 mm thick.

Among sphagnum. Stow, Massachusetts. September. S. Davis.

The peculiar habitat, deeply convex reddish brown pileus witn its slightly extended incurved margin and white flesh are distinguishing features of this variety. In the last mentioned character it resembles Boletus albocarneus Pk.

Pileus hemisphaericus convexissimusve, badius, praeter lamellas margine tenue incurvo extentus, carne alba albidave; tubuli pilei carnis carassitate longiores.

Melanconium bicolor candidum

This differs from the typical form in having the stroma pure white and the spores obovate or narrowed toward one end.

Bark of red mulberry, Morus rubra L. Rolling Bay, Washington. July. E. Bartholomew.

Stroma candidum; sporae obovatae vel basi angustatae.

EDIBLE FUNGI

Boletus albus Pk.

WHITE BOLETUS

Plate 121, figures 1–5

Pileus convex, viscid when moist, white, flesh white or yellowish; tubes small or medium, subrotund, adnate, whitish becoming yellow or ochraceous; stem short, equal or slightly tapering downward, glandular dotted, white; spores ochraceous, subfusiform, 8–9 μ long, 4–4.5 μ broad.

The white boletus is easily distinguished from all our other species by its white viscid cap and its glandular dotted stem. Its cap varies in its horizontal diameter from 1.5–3.5 inches. It is generally convex, but in large plants it is often expanded until it is nearly or quite plane. Its white color is not well retained in drying. It is therefore important to see fresh specimens in order to identify the species satisfactorily. The flesh is white or barely tinged with yellow. Sometimes the fresh plant emits a peculiar, somewhat fetid or strong, odor.

The tubes in the young plant are whitish or but slightly tinged with yellow, but when mature they are ochraceous and the mouths are dotted with dark reddish brown glands. The stem is short, generally less than the diameter of the cap, cylindric or slightly narrowed at the base, solid, without any collar, dotted with reddish

brown glands and white or sometimes tinged with pink at the base. It occurs in the vicinity of pine and hemlock trees during July and August. It is not very common. It has an agreeable flavor, is tender and harmless.

Cantharellus aurantiacus (Wulf.) Fr.

ORANGE CHANTARELLE FALSE CHANTARELLE

Plate 122, figures 8–16

Pileus fleshy, soft, minutely tomentose, plane or centrally depressed, yellowish orange, sometimes tinged with smoky brown or brownish in the center only, flesh whitish or yellowish; lamellae narrow, close, decurrent, repeatedly forked, reddish orange, sometimes yellowish orange; stem equal or slightly tapering upward, solid, glabrous, colored like or paler than the pileus; spores subellipsoid, 6–8 μ long, 4–5 μ broad.

The orange chantarelle is sharply separated from the other species by its usually bright orange gills which are regularly and repeatedly forked. The cap varies from 1–3 inches broad and its upper surfaces may be convex, nearly flat or centrally depressed. It is soft in texture and covered with a minute scarcely visible tomentum. Its color is commonly a pale yellowish orange or tawny orange more or less suffused with a dull smoky tint. Sometimes the center is more distinctly brownish than the margin. The extreme margin is frequently decurved or involute. The flesh is soft, whitish or slightly yellowish.

The gills are very pretty by reason of their commonly bright orange color and regular forking.

The stem is 1–3 inches long and 2–5 lines thick. It is solid, equal in diameter throughout its length or sometimes slightly narrowed upward. In color it is generally similar to the cap, though usually paler and sometimes even darker or blackened toward the base.

There is a rare form in which the cap is white or nearly so. There is also a variety p a l l i d u s Pk. in which both cap and gills are pale yellow or whitish yellow. It occurs in swamps.

The orange chantarelle occurs most often in woods and uncultivated places in hilly and mountainous regions from July to October. It was formerly reputed poisonous or dangerous and credited with having a disagreeable flavor. In my own experiments with it the flavor has been found to be agreeable and fair trials of eating it have shown it to be perfectly harmless. I therefore have no hesitation in adding it to our list of edible species.

Lactarius camphoratus (Bull.) Fr.

CAMPHORY LACTARIUS

Plate 126, figures 1–7

Pileus thin, convex, nearly plane or centrally depressed, often with a small umbo, glabrous, dry, bay red or brownish red, flesh tinged with the color of the pileus, milk white, taste mild; lamellae thin, narrow, close, adnate or slightly decurrent, dull reddish or similar to the pileus; stem subequal, glabrous, stuffed or hollow, colored like or a little paler than the pileus; spores globose, white, 8-9 μ in diameter.

The camphory lactarius is closely related to the sweetish lactarius, Lactarius subdulcis (Bull.) Fr. from which it is separated by its darker red color and its agreeable odor. In color it approaches Lactarius rufus (Scop.) Fr. from which its smaller size and mild taste easily separate it. Its umbo, when present, is very small and its margin is sometimes wavy. The color is generally bay red, but occasionally it approaches the color of the cap of the sweetish lactarius from which the odor is then the most available character for the separation of these species.

The gills also are occasionally paler than usual and thereby tend to the confusion of these two species. The odor is less pronounced in the fresh plant than in the dry. It becomes more distinct in drying and persists a long time. It is not like that of camphor as the name would suggest, but resembles more the odor of dried melilot. It is not always wholly dispelled by cooking, but the flavor is not in our opinion a serious objection to the edibility of this mushroom. It occurs in swamps, wet places and in woods from July to September.

Lactarius lignyotus Fr.

SOOTY LACTARIUS

Plate 123, figures 1–6

Pileus convex, plane or slightly depressed, dry, with or without a small umbo, often radiately wrinkled in the center, pruinosely velvety, even on the margin or crenately lobed and distantly but briefly plicate striate, sooty brown, flesh white, milk white, taste mild or tardily and slightly acrid; lamellae subdistant, adnate or slightly decurrent, white or creamy yellow, assuming reddish tints

where wounded; stem equal or tapering upward, stuffed, rather long, colored like the pileus; spores globose, echinulate, 8–10 μ in diameter.

The sooty lactarius is a very noticeable species, well marked by its dark brown color, velvety appearance, long stem and wounds of the gills and flesh slowly assuming reddish hues.

The cap varies from 1–4 inches broad, and is usually marked in the center by slight radiating rugosities or wrinkles. It is often marked by a small central prominence. Its dark sooty color and soft velvety appearance are attractive features. The margin is sometimes even, sometimes scalloped and marked with short parallel striations.

The gills are moderately distant from each other, and vary in color from white to creamy yellow or pale ochraceous. Where cut or broken the wounds slowly assume a reddish tint. The milk is scanty, white and mild.

The stem is generally from 2–4 inches long and 2–4 lines thick, but sometimes these dimensions are exceeded. It is often abruptly narrowed at the top and there slightly striate. Its color is like that of the cap.

It occurs most often in hilly or mountainous places, growing in shaded, mossy or damp places in woods and swamps. It is an excellent edible species, and occurs from July to September.

Variety tenuipes Pk. has the pileus about 1 inch broad, and the stem 2–3 inches long and about 2 lines thick.

Lycoperdon atropurpureum Vitt.

PURPLE SPORED PUFF BALL

Plate 121, figures 6–10

Peridium variable in size and shape, 1–2 inches broad, globose, subglobose or obovoid, clothed with slender hairs or spinules which are longer and convergent on the upper part of the peridium, shorter or wanting on the lower part, grayish, brownish or blackish above, paler below, easily rubbed off, commonly disappearing from the mature peridium, the young peridium is whitish below, tinged with gray or brown above, the whole becoming at last smooth, shining and brown, the interior at first fleshy, white, becoming olivaceous with age and finally purplish brown, dry and dusty; the threads of the capillitium are branched, the main stem is about equal in thickness to the diameter of the spores; spores purplish brown, globose, warted, 5–7 μ in diameter.

Ground in woods or in bushy places. August to September. Common.

This, like other puff balls, is edible only while the flesh is clear white. When it assumes a yellow hue it is no longer palatable and when it becomes dry and dusty with the mature spores no one would think of eating it. In the edible state the texture and color of the flesh of this species may be compared to those of a very fine grained soft cottage cheese.

CRANBERRY AND AVERYVILLE MARSHES

Cranberry marsh is in the eastern part of the town of Sand Lake, Rensselaer county. It is an irregular oblong marsh apparently about a half mile long and one-fifth mile broad in its widest part. A sluggish stream flows centrally through its longest diameter. Sphagnum moss is plentiful and forms a soft carpet over most of its surface. Cranberries were formerly produced on it in great abundance, but now these plants are limited to the banks of the stream and a few of the more wet and boggy places. The surface of the marsh is mostly much more firm than it was sixty years ago. Shrubs are more numerous and widespread and small coniferous trees have sprung up in some of the older parts. Some of the orchids that beautified the marsh less than twenty-five years ago have now nearly or quite disappeared. The purple fringed orchis is no longer found there, and of the white fringed orchis only a single flowering specimen was seen in my recent visits. The bladder-fruited or bottle sedge, which formerly bore seed freely there, has now become smaller, less vigorous and completely sterile. The changed conditions induced by the destruction of the surrounding forests and the often recurring summer drouths are gradually exterminating those plants that require a more uniform temperature and constant moisture. The advancing shrubs crowd out or overpower the weaker and less persistent herbaceous plants. This marsh is steadily approaching the shrubby stage in which sphagnum and marsh herbs will scarcely be able to maintain their existence. The number of species of flowering plants and ferns found in this marsh is 76.

Averyville marsh is in the town of North Elba, Essex county. It is about three miles south of Lake Placid. It is apparently about one mile long and one-third mile broad in its widest part. Near the middle it is much more narrow than toward either end by reason of the encroachment of the forest on both sides. This con-

traction in width divides it into two nearly equal parts, the northern and southern. Chub river runs through its longest diameter from south to north. At the contracted part and for a short distance north of it the river runs close to the margin of the forest on the eastern side, leaving most of the marsh here on the west side of the river. In the rest of the marsh the river is more central. This marsh is peculiar in having the two parts wholly unlike in character and representative of two different kinds of marsh. The northern part is a shrubby marsh. Low shrubs like Labrador tea, sheep laurel, pale laurel, bog rosemary and leather leaf have taken almost complete possession. The usual marsh herbs are nearly exterminated except along the banks of the river and in a few low places. The sphagnum has a dwarf, starved appearance and is evidently struggling for existence. A few dwarf, unthrifty black spruce and tamarack trees are scattered here and there over this part of the marsh. The balsam fir is strangely absent from the open space, but it occurs sparingly along the margin. It is apparently less fitted to endure the unfavorable conditions of the marsh than either the black spruce or the tamarack.

The southern part is a grassy marsh. It is locally known as a "beaver meadow." It is mostly occupied by grasses and sedges. Blue joint grass, Calamagrostis canadensis (Mx.) Bv. and slender sedge, Carex filiformis L. are the prevailing species. They are so abundant that in past times it was customary to mow this part of the marsh and stack the hay till winter when it would be possible to draw it away and make use of it. The scaffoldings of the stacks are still in place, but as this marsh hay is of inferior quality it is not now gathered, other hay of better quality being available. It is remarkable that not a single example of the slender sedge gave any evidence of having borne fruit this season. My visit was too late in the season to find fruit on the plant, but a careful search for old fruit-bearing stems was vain. Possibly the previous cuttings of the plants weakened their fruiting capacity till now they depend entirely on offshoots or stolons for propagation. On the contrary, the blue joint grass was fruiting freely.

The grassy marsh, like the open prairie, appears to be unfavorable to the production of trees. No spruce or tamarack trees were seen in this part of the marsh. Even the shrubs that are so abundant in the northern part are mostly wanting here. Those that do appear are chiefly along or near the river.

The number of species of flowering plants and ferns found in this marsh is 57. This is considerably less than the number found in Cranberry marsh, though the area of the marsh is apparently more than twice as large. On the other hand, but one visit was made here and that so late in the season that probably some early flowering herbaceous species were overlooked.

A list of the names of the species found in each marsh is given below. It will be seen that 33 species are common to both marshes. This is more than half the number of species found in Averyville marsh. These are species likely to be found in most of our larger cold sphagnum bogs and marshes. They are the active agents in the formation of peat beds and in preparing the marsh for the habitation of the larger shrubs and trees. In other words, they are the forerunners of swamps, the trees and shrubs of which, in turn, prepare the way for productive lowland meadows and truck gardens. Of the 33 species common to the two marshes 15, or nearly half, are trees or shrubs. This indicates an advanced stage of the marshes toward a wooded swamp. In Bonaparte swamp the number of trees and shrubs is 29, in Cranberry marsh 20, in Averyville marsh 21. The number of species common to the three marshes is 19. In the following list of species will be found the names of the species of each of the two marshes and those common to the three marshes.

Plants of Cranberry marsh, Sand Lake, Rensselaer co.

Abies balsamea *(L.) Mill.*
Acer rubrum *L.*
Alnus incana *(L.) Moench*
Andromeda glaucophylla *Lk.*
Arisaema triphyllum *(L.) Schott*
Aspidium cristatum *(L.) Sw.*
A. noveboracense *(L.) Sw.*
Aster puniceus *L.*
Calamagrostis canadensis *(Mx.)*
Calla palustris *L.*
Calopogon pulchellus *(Sw.) R. Br.*
Carex canescens *L.*
C. filiformis *L.*
C. folliculata *L.*
C. intumescens *Rudge*
C. leptalea *Wahl.*
C. limosa *L.*
C. magellanica *Lam.*
C. pauciflora *Lightf.*
Carex stell. angustata *Carey*
C. trisperma *Dew.*
C. utriculata *Boott*
Chamaedaphne calyculata *(L.)*
Chelone glabra *L.*
Cinna latifolia *(Trev.) Griseb.*
Cornus canadensis elongata *Pk.*
Drosera longifolia *L.*
D. rotundifolia *L.*
Dulichium arundinaceum *L.*
Epilobium palustre *L.*
Eriophorum callitrix *Cham.*
E. virginicum *L.*
Galium palustre *L.*
Gaultheria procumbens *L.*
Glyceria canadensis *(Mx.) Trin.*
G. pallida *(Torr.) Trin.*
G. torreyana *(Spreng.)*
Habenaria blephariglottis *(Willd.)*

Habenaria clavellata *(Mx.)*
Hypericum virginicum *L.*
Impatiens biflora *Walt.*
Iris versicolor *L.*
Kalmia angustifolia *L.*
K. polifolia *Wang.*
Larix laricina *(DuRoi) Koch*
Ledum groenlandicum *Oeder*
Lycopodium inundatum *L.*
Lycopus virginicus *L.*
Lysimachia terrestris *(L.) BSP.*
Menyanthes trifoliata *L.*
Nemopanthes mucronata *(L.) Trel.*
Nymphaea advena *Ait.*
Picea mariana *(Mill.) BSP.*
P. rubra *(DuRoi) Dietr.*
Pinus strobus L.
Pogonia ophioglossoides *(L.)*
Polygonum sagittatum *L.*
Potomogeton epihydrus *Raf.*
Pyrus melanocarpa *(Mx.) Willd.*
Rosa blanda *Ait.*
Rubus hispidus *L.*
R. triflorus *Richards.*
Rynchospora alba *(L.) Vahl*
Sarracenia purpurea *L.*
Scheuchzeria palustris *L.*
Scutellaria lateriflora *L.*
Sparganium minimum *Fr.*
Spiraea latifolia *Borkh.*
Trientalis americana *Pers.*
Utricularia cornuta *Mx.*
Vaccinium canadense *Kalm*
V. corymbosum *L.*
V. macrocarpon *Ait.*
V. oxycoccos *L.*
V. pennsylvanicum *Lam.*
Viburnum cassinoides *L.*

Plants of Averyville marsh, North Elba, Essex co.

Abies balsamea *(L.) Mill.*
Agrostis hyemalis *(Walt.) BSP.*
Alnus incana *(L.) Moench*
Andromeda glaucophylla *Lk.*
Aspidium cristatum *(L.) Sw.*
Aster puniceus *L.*
A. umbellatus *Mill.*
Bromus altissimus *Pursh*
Calamagrostis canadensis *(Mx.)*
Campanula aparinoides *Pursh*
Carex filiformis *L.*
C. leptalea *Wahl.*
C. pauciflora *Lightf.*
Chamaedaphne calyculata *(L.)*
Cicuta bulbifera *L.*
Cirsium muticum *Mx.*
Cornus canadensis elongata *Pk.*
C. stolonifera *Mx.*
Dalibarda repens *L.*
Epilobium palustre *L.*
Eriophorum callitrix *Cham.*
E. virginicum *L.*
Eupatorium purpureum *L.*
Galium asprellum *Mx.*
Gaultheria procumbens *L.*
Gentiana linearis *Froel.*
Glyceria canadensis *(Mx.) Trin.*
Hippuris vulgaris *L.*
Hypericum ellipticum *Hook.*
Hypericum virginicum *L.*
Iris versicolor *L.*
Juncus brevicaudatus *(Engelm.)*
Kalmia angustifolia *L.*
K. polifolia *Wang.*
Larix laricina *(DuRoi) Koch*
Ledum groenlandicum *Oeder*
Lysimachia terrestris *(L.) BSP.*
Nemopanthes mucronata *(L.) Trel.*
Nymphaea hybrida *(Pk.)*
Picea mariana *(Mill.) BSP.*
Potamogeton epihydrus *Raf.*
Pyrus americana *(Marsh.) DC.*
P. melanocarpa *(Mx.) Willd.*
Rubus triflorus *Richards.*
Salix rostrata *Richards.*
Sambucus canadensis *L.*
Senecio robbinsii *Oakes*
Solidago altissima *L.*
S. serotina *Ait.*
S. uliginosa *Nutt.*
Spiraea latifolia *Borkh.*
Thalictrum polygamum *Muhl.*
Thuja occidentalis *L.*
Vaccinium canadense *Kalm*
V. oxycoccos *L.*
V. pennsylvanicum *Lam.*
Viburnum cassinoides *L.*

Common to the two marshes

Abies balsamea *(L.) Mill.*
Alnus incana *(L.) Moench*
Andromeda glaucophylla *Lk.*
Aspidium cristatum *(L.) Sw.*
Aster puniceus *L.*
Calamagrostis canadensis *(Mx.)*
Carex filiformis *L.*
C. leptalea *Wahl.*
C. pauciflora *Lightf.*
Chamaedaphne calyculata *(L.)*
Cornus canadensis elongata *Pk.*
Epilobium palustre *L.*
Eriophorum callitrix *Cham.*
E. virginicum *L.*
Gaultheria procumbens *L.*
Glyceria canadensis *(Mx.) Trin.*
Hypericum virginicum *L.*
Iris versicolor *L.*
Kalmia angustifolia *L.*
K. polifolia *Wang.*
Larix laricina *(DuRoi) Koch*
Ledum groenlandicum *Oeder*
Lysimachia terrestris *(L.) BSP.*
Nemopanthes mucronata *(L.) Trel.*
Picea mariana *(Mill.) BSP.*
Potamogeton epihydrus *Raf.*
Pyrus melanocarpa *(Mx.) Willd.*
Rubus triflorus *Richards.*
Spiraea latifolia *Borkh.*
Vaccinium canadense *Kalm*
V. oxycoccos *L.*
V. pennsylvanicum *Lam.*
Viburnum cassinoides *L.*

Common to the two marshes and Bonaparte swamp

Abies balsamea *(L.) Mill.*
Alnus incana *(L.) Moench*
Andromeda glaucophylla *Lk.*
Aster puniceus *L.*
Calamagrostis canadensis *(Mx.)*
Chamaedaphne calyculata *(L.)*
Carex filiformis *L.*
C. leptalea *Wahl.*
Epilobium palustre *L.*
Eriophorum callitrix *Cham.*
E. virginicum *L.*
Glyceria canadensis *(Mx.) Trin.*
Hypericum virginicum *L.*
Iris versicolor *L.*
Ledum groenlandicum *Oeder*
Nemopanthes mucronata *(L.) Trel.*
Picea mariana *(Mill.) BSP.*
Rubus triflorus *Richards*
Vaccinium oxycoccos *L.*

NEW YORK SPECIES OF HYPHOLOMA

Hypholoma Fr.

Pileus more or less fleshy, the margin at first incurved; lamellae adnate or sinuate and adnexed; veil interwoven, adhering in fragments to the margin of the pileus, not forming a distinct membranous annulus on the stem; spores brown or purplish brown.

The appendiculate character of the margin of the young pileus is a distinguishing feature of the genus and is suggestive of its name. Many of the species grow on wood and are cespitose in their mode of growth. The spore color is brown or purplish brown, but in a few species the spore print on white paper is almost black. The genus corresponds in structure to the white spored genus Tricholoma, the pink spored Entoloma and the ochraceous spored

Hebeloma. Species with a luxuriant development of the veil must be carefully distinguished from Stropharia on one hand, and those with a scanty development of it, from Psilocybe on the other. The species are not in all cases sharply limited and connecting forms are not always satisfactorily located. They have been distributed in five sections, one of which, the Viscida, is yet unrepresented in our flora. The following synoptical key gives the distinguishing characters of the sections.

KEY TO THE SECTIONS

Pileus hygrophanous ..... Appendiculata
Pileus not hygrophanous 1
1 Pileus glabrous red or yellow its prevailing colors ..... Fascicularia
1 Pileus not wholly glabrous and with other prevailing colors 2
2 Pileus silky or floccose when young ..... Floccosa
2 Pileus hairy or fibrillose, brown or brownish ..... Velutina

Appendiculata

Pileus hygrophanous, glabrous when mature.

The species are commonly small, the pileus rarely exceeding two inches in diameter. They inhabit decaying wood or ground rich in humus and are gregarious or cespitose. The color of the pileus in some species is greatly changed by the escape of its moisture, in others but slightly. This may be regarded as a difficult section because of the variability of the species and their close resemblance to each other.

KEY TO THE SPECIES

Pileus at first whitish or yellowish ..... incertum
Pileus at first some other color 1
1 Young lamellae violaceous ..... candolleanum
1 Young lamellae not violaceous 2
2 Moisture of fresh pileus escaping first from the margin ... madeodiscum
2 Moisture of fresh pileus escaping first from the center 3
3 Plants gregarious, terrestrial ..... hymenocephalum
3 Plants commonly cespitose and lignatile ..... appendiculatum

Hypholoma incertum Pk.

UNCERTAIN HYPHOLOMA

N. Y. State Mus. Rep't 29, p.40. Mus. Mem. 4, p.165, pl.60, fig.1-9

Pileus thin, fragile, ovate or subcampanulate becoming yellow, especially in the center, commonly white when dry, even or radiately wrinkled, the thin margin sometimes wavy or irregular and when young adorned with fragments of the white fugacious veil, flesh

white; lamellae thin, close, narrow, adnate, whitish then rosy brown, finally purplish brown; stem equal, hollow, easily splitting, white or whitish; spores 8–10 μ long, 4–6 μ broad.

Pileus 2–6 cm broad; stem 2.5–7 cm long, 2–6 mm thick.

Gregarious or sparingly cespitose in lawns, pastures, grassy and bushy places and by roadsides in showery weather. May to September. Common. Edible and of excellent flavor.

This species differs from the next following species in its paler young pileus, its adnate lamellae which also are not at first violaceous and in its stem which is not striate at the top. It differs also from the appendiculate hypholoma, Hypholoma appendiculatum (Bull.) Fr. by its paler pileus, its larger spores, its more gregarious habit and in its habitat. It occasionally has the pileus radiately and areolately rimose.

Hypholoma candolleanum Fr.

CANDOLLE HYPHOLOMA

Sylloge V, p.1038

Pileus fleshy but thin, convex or subcampanulate, becoming expanded, obtuse, glabrous, hygrophanous, bay when young and moist, white with a yellowish center when dry, flesh white; lamellae rounded behind, adnexed, close, at first violaceous, then cinnamon brown; stem fragile, subfibrillose, hollow, striate at the apex, white; spores 8–9 μ long, 4–5 μ broad.

Pileus 5–10 cm broad; stem 5–7 cm long, 3–6 mm thick.

Cespitose. Growing on the ground. Silver Springs, Wyoming co. August. Rare.

We have not seen young and fresh specimens of this plant and doubtfully admit it on the strength of specimens which, in this case as in others so referred, do not show young lamellae with a violaceous color, though in other respects they appear to belong to it. Even the figures of it given in Mycological Illustrations and in Illustrations of British Fungi do not show this color to the lamellae, though the description of the species requires it.

Hypholoma madeodiscum Pk.

MOIST DISK HYPHOLOMA

N. Y. State Mus. Rep't 38, p.88

Pileus thin, convex becoming nearly plane, hygrophanous, reddish brown when moist, grayish, tawny or ochraceous and rugose in the

center when dry, the moisture escaping first from the margin, slightly silky fibrillose on the margin when young; lamellae close, slightly sinuate, adnexed, whitish becoming brown or purplish brown; stem equal or slightly thickened at the base, hollow, slightly silky fibrillose, obscurely striate at the apex, white; spores 8–10 μ long, 5–6 μ broad.

Pileus 2.5–5 cm broad, stem 4–7 cm long, 4–6 mm thick.

Single or gregarious. Decaying wood. Adirondack mountains. June. Rare. Found but once.

Remarkable for the persistency of the moisture in the center of the pileus. This character is suggestive of the specific name and separates it from allied species. It has some points of agreement with the candolle hypholoma, Hypholoma candolleanum Fr., but differs from it in its mode of growth and in the color of the young lamellae.

Hypholoma hymenocephalum Pk.

THIN CAP HYPHOLOMA

N. Y. State Mus. Rep't 31, p.34

Pileus very thin and fragile, campanulate or convex becoming expanded, sometimes umbonate, hygrophanous, brown and striatulate when moist, pallid or whitish and radiately rugulose when dry, subatomate, the whitish appendiculate veil soon evanescent; lamellae thin, narrow, close, dingy white becoming purplish brown; stem slender, fragile, hollow, striate, slightly mealy at the top, white; spores 8 μ long, 4 μ broad.

Pileus 2.5–5 cm broad; stem 5–10 cm long, 2–3 mm thick.

Gregarious. Damp ground among fallen leaves, especially under shrubs or small trees. Occasional. July and August.

The species is remarkable for its very thin and fragile pileus and for its fragile striate stem. The margin of the pileus is sometimes deeply split, forming radiating lobes and giving a stellate appearance to the cap.

Hypholoma appendiculatum (Bull.) Fr.

APPENDICULATE HYPHOLOMA

Sylloge V, p.1039

Pileus thin, fleshy, ovoid or convex becoming expanded, glabrous, hygrophanous, bay brown or tawny brown when moist, ochraceous or pale ochraceous and rugose after the escape of the moisture;

lamellae close, narrow, adnate, whitish or creamy white becoming purplish brown; stem slender, equal, hollow, glabrous, pruinose at the top, white, the veil webby, white or whitish attached to the margin of the pileus when young, quickly disappearing; spores 5-7 μ long, 3–4 μ broad.

Pileus 2–6 cm broad; stem 5–7 cm long, 4–6 mm thick.

Densely cespitose. Decaying wood chiefly in woods of hilly or mountainous districts. August to October.

This name as used by Bulliard appears to have been applied to at least two species and on this account some confusion has resulted. In the Outlines of British Fungology, plate 11, figures 3 and 4, two species are evidently included under this name. In Sylloge V, page 1039, the name is limited to the species represented by figure 3. In our treatment of this species we have limited it to those specimens which best agree with the characters ascribed to it in Sylloge. The agreement is good except in the color of the gills, which in our specimens passes from whitish to purplish brown instead of incarnate brown. The peculiar characters of the species are its tendency to form dense tufts, to grow chiefly on decaying wood, to be very hygrophanous, the difference between the color of the moist cap and the dry being well marked, and in the lateness of its appearance. The dimensions of the spores are given in Sylloge as 6–8 x 3–4 μ, in British Fungus Flora as 5 x 2.5 μ. In our specimens they agree better with those given in Sylloge.

Fascicularia

Pileus tenacious, glabrous, bright colored, dry, not hygrophanous.

The flesh of the pileus in this section is thicker and more firm than in the species of the preceding one. The prevailing colors of the pileus are red and yellow and its surface is smooth and not at all hygrophanous. They usually grow in tufts on dead or decaying wood and appear in autumn. The species resemble each other closely and should be cautiously separated.

KEY TO THE SPECIES

Young stem stuffed ..... sublateritium
Young stem hollow 1
1 Prevailing color of the pileus red ..... perplexum
1 Prevailing color of the pileus yellow ..... capnoides

Hypholoma sublateritium (Schaeff.) Fr.

BRICK RED HYPHOLOMA

Sylloge V, p.1028

Pileus fleshy, convex or nearly plane, glabrous, obtuse, dry, dark brick red, often paler on the margin, flesh whitish or yellowish, taste commonly bitter, sometimes mild; lamellae close, adnate, whitish becoming sooty olivaceous or purplish brown; stem equal or tapering downward near the base, glabrous or slightly fibrillose, stuffed, sometimes becoming hollow when old, ferruginous; spores 6–8 μ long, 3–4 μ broad.

Pileus 2.5–7.5 cm broad; stem 5–9 cm long, 4–12 mm thick.

Commonly cespitose. On or about old stumps, prostrate trunks of trees and on decaying wood covered with earth. August to November. Common. Edible. Occasionally several stems grow from a common base.

Hypholoma sublateritium squamosum Cke. Pileus spotted with appressed darker scales, otherwise like the type. This variety is rare, having been found but once. Piseco, Hamilton co. August.

Hypholoma perplexum Pk.

PERPLEXING HYPHOLOMA

N. Y. State Cab. Rep't 23, p.99. Mus. Mem. 4, p.166, pl.60, fig.10-17

Pileus convex or nearly plane, sometimes umbonate, glabrous, reddish or brownish red, usually yellowish on the margin, flesh white or whitish, taste mild; lamellae thin, close, slightly rounded behind, adnexed, pale yellow becoming tinged with green, finally purplish brown; stem rather slender, equal or nearly so, firm, hollow, slightly fibrillose, whitish or yellowish above, reddish brown below; spores 6–8 μ long, 3–4 μ broad.

Pileus 2.5–7 cm broad; stem 5–7 cm long, 4–8 mm thick.

Generally cespitose. On or about stumps or prostrate trunks of trees in woods or open places. Common. August to November. Edible.

This is very closely related to the preceding species, its distinguishing features being its commonly smaller size, paler margin of the pileus, mild taste, paler and more slender stem which is always hollow, even when young. A small form of it has been found by F. C. Stewart growing from the base of cultivated red currants. This may indicate a parasitic tendency of it.

Hypholoma capnoides Fr.

FIR WOOD HYPHOLOMA

Sylloge V, p.1028

Pileus fleshy, convex or nearly plane, obtuse, glabrous, dry, yellowish, often reddish or ochraceous in the center, flesh white, odor and taste mild; lamellae moderately close, adnate, dry, smoky gray becoming purplish or brown; stem equal or nearly so, silky, striate at the top, sometimes curved or flexuous, hollow, pallid; spores 7–8 μ long, 4–5 μ broad.

Pileus 2.5–4 cm broad; stem 4–7 cm long, 4–6 mm thick.

Single or cespitose. On or about pine and spruce stumps or prostrate trunks. Adirondack mountains and Albany co. May to September. Rare.

The Friesian description ascribes only yellowish and ochraceous colors to the pileus of this species, but in our specimens the center of the pileus is often reddish or orange tinted. This color is also shown in the figures of the species as given in Icones, plate 133, and in Illustrations of British Fungi, plate 559. The mature lamellae of the typical form are described as purplish, but in our specimens they are brown with no apparent purplish tint. We have not thought it best to separate our plant on account of this slight deviation from the description of the color of the mature lamellae of the European form of the species.

Floccosa

Pileus silky or adorned when young with superficial floccose scales. This section at present is represented in our State by two species only.

KEY TO THE SPECIES

Pileus silky or fibrillosely spotted.....aggregatum
Pileus floccosely scaly.....fragile

Hypholoma aggregatum Pk.

AGGREGATED HYPHOLOMA

N. Y. State Mus. Ann. Rep't 46, p. 106; Botanist's ed. p. 26

Pileus thin, convex or subcampanulate, obscurely spotted by appressed brownish fibrils, grayish white, flesh white; lamellae subdistant, rounded behind, adnexed, whitish becoming brown or

blackish brown, whitish on the edge; stem long, slender, hollow, slightly floccose or fibrillose, white; spores 7–8 μ long, 4–5 μ broad.

Pileus 2–3 cm broad; stem 5–8 cm long, 3–4 mm thick.

Densely cespitose. Base of trees and stumps. Albany co. September. Rare.

The densely tufted mode of growth and the grayish white, obscurely spotted pileus are distinguishing features of this species. From Hypholoma silvestre Gill. it may be separated by its smaller size, densely tufted mode of growth and adnexed lamellae with no rosy tint. From Hypholoma storea Fr. it is distinguished by its hollow stem, adnexed lamellae and the absence of an umbo.

Hypholoma aggregatum sericeum Pk.

N. Y. State Mus. Bul. 54, p.972, pl.79, fig.8–14

This variety differs from the typical form in its pileus being silky and destitute of spots and in having its stem striate at the top.

Warren co. September. Rare. Edible.

The edibility of the typical form of the species has not been tested by myself, but according to McIlvaine the caps are fine.

Hypholoma fragile Pk.

FRAGILE HYPHOLOMA

N. Y. State Mus. Bul. 131, p.22, pl.V, fig.1–7

Pileus thin, fragile, conic or subcampanulate becoming convex, obtuse or subumbonate, floccosely squamulose when young, glabrous when mature, yellowish, grayish or subochraceous, sometimes more highly colored in the center, the thin margin at first appendiculate with fragments of the white veil; lamellae thin, narrow, close, adnate, whitish or pallid becoming purplish brown; stem slender, fragile, stuffed or hollow, glabrous or minutely floccose, white or pallid; spores 8–10 μ long, 4–5 μ broad.

Pileus 1.2–2.4 cm broad; stem 2.5–5 cm long, 2–3 mm thick.

Gregarious. Decayed wood and among fallen leaves in damp places in woods. Starlake, St Lawrence co. Painted Post, Steuben co. August. Not common.

A small, delicate and fragile species. The specimens from Star lake are smaller and more highly colored than the others, but do not seem worthy of separation. The dried specimens bear some resemblance to Hypholoma incertum Pk., but the ab-

sence of the hygrophanous character of the pileus, its smaller size and more fragile nature and its different habitat lead me to keep it separate.

Velutina

Pileus silky or streaked with innate fibrils, sometimes glabrous.

The characters of this section, as given in Sylloge, would strictly admit only species having a silky or fibrillose pileus, but inasmuch as species like Hypholoma atrichum Berk. and H. castanophyllum Berk., of which the pileus is described as glabrous, have been admitted to it, we have extended the definition to include glabrous species which in other respects belong here. The species of the section generally have the color of the spores darker than in the preceding sections. Therefore the color of the mature lamellae is almost or quite black and the spore print on white paper appears black or nearly so. On this account the species are liable at first sight to be referred to the black spored series. The shape and size of the spores are in some cases important characters in distinguishing closely related species.

KEY TO THE SPECIES

Pileus persistently hairy squamose or fibrillose.....1
Pileus partly or wholly glabrous.....2
1 Plant cespitose, spores 8–10 x 5–6 μ.....lacrymabundum
1 Plant gregarious, spores 10–12 x 6–8 μ.....rigidipes
2 Pileus even, the cuticle often rimose.....boughtoni
2 Pileus rugose or radiately wrinkled.....3
3 Pileus tawny, spores rough .....rugocephalum
3 Pileus brown, spores smooth.....delineatum

Hypholoma lacrymabundum Fr.

WEEPING HYPHOLOMA

Sylloge V, p.1033

Pileus fleshy, convex, obtuse, persistently squamose with dark brown or blackish hairy tufts, not hygrophanous, often irregular from its crowded tufted mode of growth, brown or tawny brown, flesh whitish; lamellae moderately close, adnate or subsinuate, whitish becoming purplish brown, almost black when fully mature, whitish on the edge, often beaded with tearlike drops of moisture in damp weather; stem equal or nearly so, fibrillose or squamose, hollow, whitish, pallid or brownish; spores purplish brown, 8–10 μ long, 5–6 μ broad.

Pileus 5–8 cm broad; stem 5–8 cm long, 5–8 mm thick.

Single or cespitose. On or about old stumps. Albany co. August to October. Not common.

The ornamentation of the pileus is variable. The hairlike fibrils are sometimes elongated and appressed, sometimes collected in tufts. They are often black and occasionally coarse and strigose, specially on the margin.

Hypholoma rigidipes Pk.

RIGID STEM HYPHOLOMA

N. Y. State Mus. Bul. 139, p.24, pl.III, fig.1–6

Pileus fleshy, thin, convex or broadly convex, dry, fibrillose squamulose, tawny brown, often reddish in the center, flesh whitish, taste mild; lamellae close, narrow, slightly sinuate, adnexed, brownish red becoming dark purplish brown or black; stem slender, rigid, equal, hollow, fibrillose squamulose, colored like or little paler than the pileus; spores broadly ellipsoid, apiculate, 10–12 μ long, 6–8 μ broad.

Pileus 2.5–5 cm broad; stem 5–10 cm long, 4–6 mm thick.

Gregarious. Damp places among tall herbs. North River, Warren co. September. Rare.

This species is well marked by its gregarious mode of growth. In the ornamentation of the pileus it is related to the preceding species, but it differs in its mode of growth, smaller size, more slender rigid stem and larger apiculate spores.

Hypholoma boughtoni Pk.

BOUGHTON HYPHOLOMA

N. Y. State Mus. Bul. 139, p.23, pl.II, fig.1–7

Pileus fleshy, thin except in the center, broadly convex or subhemispheric, rarely with an umbo, glabrous or slightly fibrillose, often concentrically or areolately cracking, pale reddish brown or grayish brown, flesh whitish, taste disagreeable; lamellae moderately close, adnate, purplish brown, seal brown or blackish, obscurely spotted, whitish on the edge; stem equal, floccosely fibrillose, striate at the top, hollow, white or whitish; spores broadly and unequally ellipsoid, apiculate, black on white paper, 10–12 μ long, 7–8 μ broad.

Pileus 2.5–7 cm broad; stem 2.5–6 cm long, 4–10 mm thick.

Ground in woods or open places. Albany, Monroe, New York and Tompkins counties. August and September.

Hypholoma rugocephalum Atk.

RUGOSE HYPHOLOMA

Mushrooms, Edible and Poisonous, 2d ed., p.30, pl.8, fig.29

Pileus fleshy in the center, convex becoming expanded, broadly umbonate, glabrous, irregularly wrinkled or rugose, tawny, the thin margin often curved upward, flesh tinged with yellow; lamellae thin, slightly sinuate, adnate, easily seceding from the stem, spotted, purplish black when mature; stem even, irregular, fleshy, hollow, glabrous, subbulbous, colored like the pileus, paler above the slight filamentous often spore-blackened remnants of the annulus; spores oval or broadly ellipsoid, inequilateral, pointed at each end, echinulate or minutely tuberculate, 8–11 μ long, 6–8 μ broad, black; cystidia cylindric, slightly enlarged at the top, hyaline, clustered.

Pileus 6–10 cm broad; stem 7–10 cm long, 6–10 mm thick.

Single or cespitose. Damp places in woods. July and August. Tompkins and Suffolk counties.

This is related to the preceding species from which it may be separated by its wholly glabrous tawny pileus and its rugosely wrinkled continuous cuticle. Both are allied to Hypholoma velutinum (Pers.) Fr., but may be distinguished from it by the absence of the hygrophanous character and by their broader spores.

Hypholoma delineatum n. sp.

DELINEATED HYPHOLOMA

Pileus fleshy, thin, convex or nearly plane, often slightly depressed in the center, glabrous, rugose or radiately wrinkled, commonly marked toward and on the margin even when dry with irregular radiating lines or ridges, occasionally wavy or irregular on the margin, brown, tawny brown or reddish brown, often darker in the center, flesh whitish; lamellae thin, close, adnate, brown becoming blackish brown; stem equal, glabrous, hollow, pallid or colored like the pileus; spores even, ellipsoid, not apiculate, 8–10 μ long, 4–6 μ broad; cystidia scarce, 40–60 μ long, 16–20 μ broad.

Pileus 2.5–5 cm broad; stem 3–5 cm long, 3–6 mm thick.

Gregarious. Ground and decayed wood. Port Jefferson, Suffolk co. August. Rare.

This species is likely to be easily mistaken for the preceding one, Hypholoma rugocephalum Atk., which it re-

sembles externally but from which it is separated by its more narrow obtuse and smooth spores and by its broader flask-shaped cystidia. Its glabrous rugosely and radiately wrinkled pileus separate it from H. velutinum (Pers.) Fr. The pileus also having neither spots nor regular striations distinguishes it from H. lepidotum Bres. Specimens of it have been received from Eglon, West Virginia, and from Rockville, Indiana.

Pileus carnosus, tenuis, convexus vel subplanus, in centro aliquando leviter depressus, glaber, rugosus vel radiate rugosus, in siccitate margine striis irregularibus radiantibus ornatus, aliquando margine irregularis, brunneus fulvo-brunneus vel rufo-brunneus, frequenter in centro nigrescens, carne albida; lamellae tenues, confertae, adnatae, aliquando leviter sinuatae, brunneae deinde nigro-brunneae; stipes aequalis, glaber, cavus, pallidus vel pileo in colore similis; sporae laeves, ellipsoideae, 8–10 x 4–6 μ; cystidia 40–60 x 16–20 μ.

Several species formerly referred to this genus have been omitted because of erroneous determination or because they are more closely related to the genus Psilocybe.

NEW YORK SPECIES OF PSATHYRA

Psathyra Fr.

Pileus membranaceous, conic or campanulate, fragile, hygrophanous, the margin at first straight and appressed to the stem; mature lamellae brown or purplish brown; stem subcartilaginous, fragile, polished, hollow; veil none or only universal and floccose fibrillose.

The genus may be separated from Psilocybe by the fragile character of the pileus and stem and by the straight appressed margin of the young pileus. It is divided into three sections, Conopileae, Obtusatae and Fibrillosae. Of the first section no representative has yet been found within our limits.

Obtusatae

Pileus campanulate or convex, glabrous or atomate; lamellae plane or arcuate; veil none.

KEY TO THE SPECIES

Pileus growing on decaying wood ..... conica
Pileus growing on ground among hair cap mosses ..... polytrichophila

Psathyra conica Pk.

CONIC PSATHYRA

N. Y. State Mus. Rep't 54, v. 1; report of the State Botanist p.153, pl.H, fig.17–22

Pileus thin, conic, rarely convex, glabrous, hygrophanous, dark brown when moist, pale ochraceous when dry; lamellae very broad, close, adnate, whitish or pallid when young, dark brown when mature, often white crenulate on the edge; stem slender, hollow, silky fibrillose, brown; spores 5–6 μ long, 3–4 μ broad.

Pileus 8–12 mm broad; stem 2–4 cm long, 1 mm thick.

Decaying prostrate trunks of spruce. Franklin co. September. Rare.

Psathyra polytrichophila Pk.

MOSS-LOVING PSATHYRA

N. Y. State Mus. Rep't 30, p. 42

Pileus thin, convex or subcampanulate, glabrous, fragile, sometimes with a slight umbo, hygrophanous, brown and striatulate on the margin when moist, pale ochraceous or buff color when dry, subshining; lamellae plane, adnate or slightly arcuate and subdecurrent, broad, subdistant, purplish brown; stem slender, equal, stuffed with a whitish pith, mealy at the top, slightly fibrillose toward the base, colored like the pileus; spores purplish brown, 8 μ long, 5 μ broad.

Pileus 4–10 mm broad; stem 2.5–5 cm long, 1–2 mm thick.

Gregarious. Ground among hair cap mosses, Polytrichum. Albany and Oneida counties. May. Rare.

Fibrillosae

Pileus and stem at first floccose or fibrillose from the universal veil.

KEY TO THE SPECIES

Pileus umbonate ..... umbonata
Pileus obtuse ..... vestita

Psathyra umbonata Pk.

UMBONATE PSATHYRA

N. Y. State Mus. Rep't 50 1:106

Pileus submembranous, campanulate, strongly umbonate, hygrophanous, purplish brown and striatulate when moist, grayish white when dry, even or slightly rugulose, atomate, often radiately sul-

cate and slightly fibrillose on the margin, the umbo usually becoming paler than the rest; lamellae broad, subdistant, ventricose, subadnate, brownish red becoming purplish brown, finally almost black; stem slender, flexuose, hollow, white, commonly hairy tomentose at the base and slightly mealy at the top; spores blackish brown or almost black, 12–16 μ long, 6–8 μ broad.

Pileus 2–3 cm broad; stem 4–7 cm long, 1.5–2 mm thick.

Gregarious or subcespitose. On chip dirt and vegetable mold. Hamilton co. July. Rare.

It is closely related to Psathyra corrugis (Pers.) Fr. from which it may be separated by its much darker colored and striatulate moist pileus, atomate and with a white umbo when dry, less glabrous and more slender stem and broader spores. The umbo is very prominent and loses its moisture before the rest of the pileus. In consequence it becomes very conspicuous, appearing like a white knob in the midst of a dark background. Because of the fibrils on the margin of the pileus it is placed in this section though the fibrils are not always present. In the dried specimens the margin is sulcate striate.

Psathyra vestita Pk.

CLOTHED PSATHYRA

N. Y. State Mus. Bul. 105, p.28

Pileus submembranaceous, ovate, conic or subcampanulate, obtuse, at first covered with white flocculent fibrils, reddish becoming pallid or white and silky fibrillose, sometimes slightly striate on the margin when moist, striate to the center when dry; lamellae thin, narrow, close, adnate, white when young, becoming blackish brown; stem equal, hollow, flexuous, floccose fibrillose becoming silky fibrillose, mealy and often striate at the top, white; spores purplish brown, 8–10 μ long, 5–6 μ broad.

Pileus 8–16 mm broad; stem 2.5–4 cm long, 2–3 mm thick.

Gregarious. Among fallen leaves and grass. Essex co. September.

This species is closely related to Psathyra semivestita B. & Br. from which it differs in color and in being wholly clothed when young with white floccose fibrils.

EXPLANATION OF PLATES

Plate 121

Boletus albus Pk.

WHITE BOLETUS

1 Young plant
2 Mature plant
3 Vertical section of upper part of a young plant
4 Vertical section of upper part of a mature plant
5 Four spores x 400

Lycoperdon atropurpureum Vitt.

PURPLE SPORED PUFF BALL

6 Two young plants
7 A mature plant
8 Vertical section of a fully grown plant while yet in edible condition
9 Vertical section of a fully mature plant
10 Four spores x 400

EDIBLE FUNGI

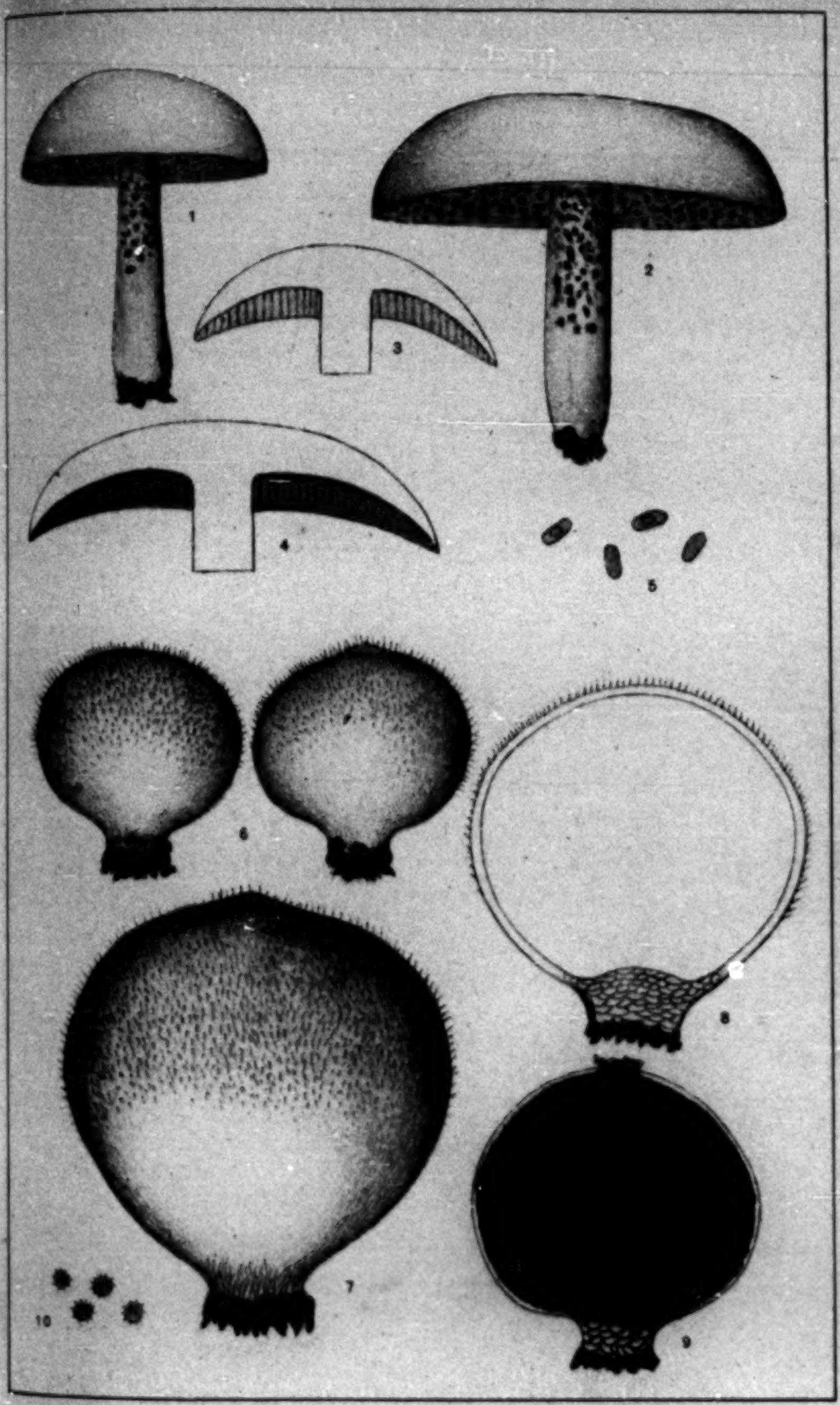


FIG. 1-5
BOLETUS ALBUS PK.
WHITE BOLETUS

FIG. 6-10
LYCOPERDON ATROPURPUREUM VITT.
PURPLE SPORED PUFF BALL

Plate 122

Lactarius camphoratus Fr.

FRAGRANT LACTARIUS

1 Young plant
2 Mature plant showing hymenium
3 Mature plant showing umbonate pileus
4–5 Vertical section of upper part of two plants
6 Transverse section of stem
7 Four spores x 400

Cantharellus aurantiacus Fr.

ORANGE CHANTARELLE

8 Young plant
9 Mature plant
10 Mature plant with brown center of pileus
11 Mature plant with gills paler than usual
12 Mature plant with white pileus and pale gills
13–14 Vertical section of upper part of two plants showing variation in color of gills
15 Diagrammatic representation of forking of the gills
16 Four spores x 400

EDIBLE FUNGI

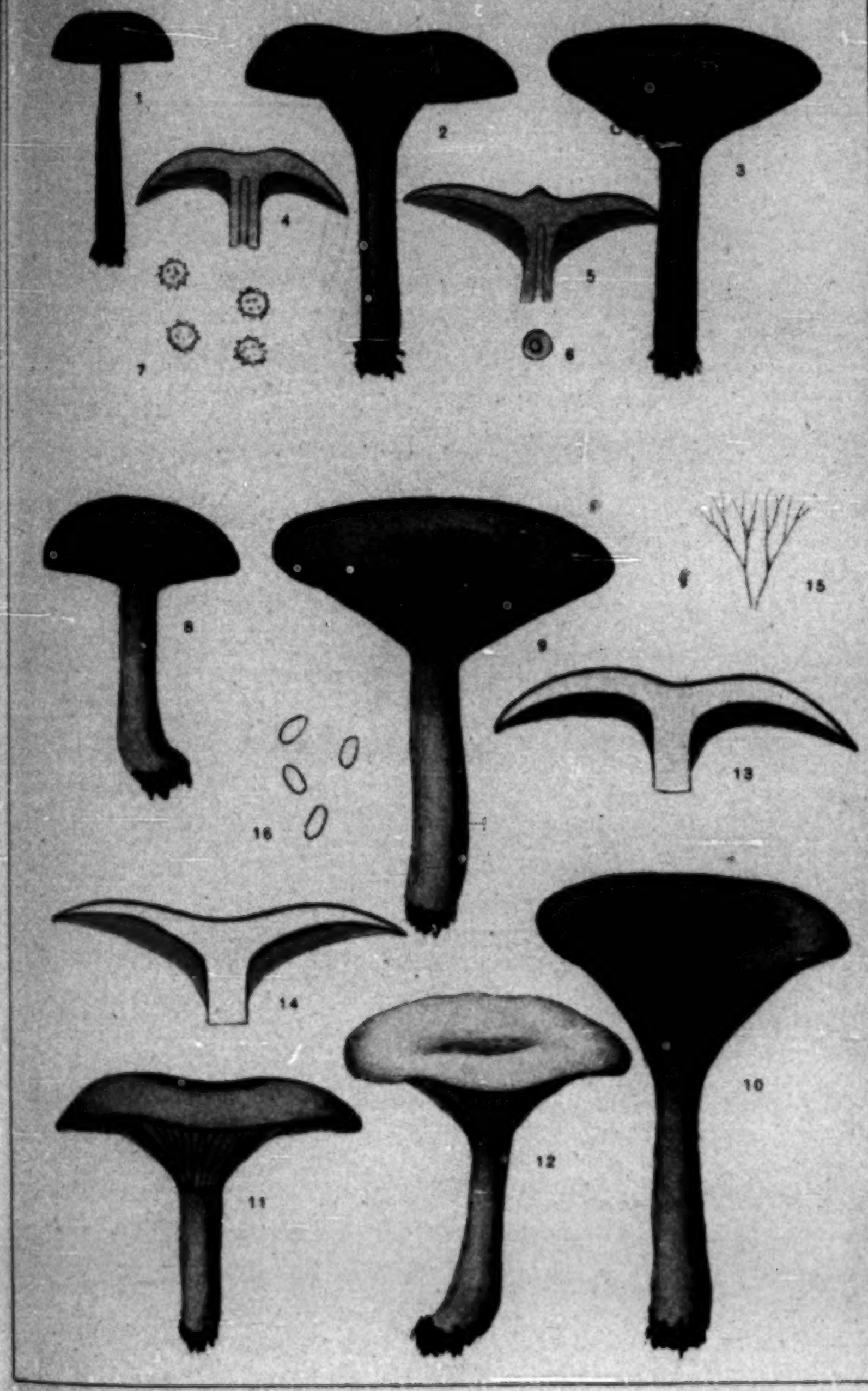


FIG. 1-7
LACTARIUS CAMPHORATUS FR.
CAMPHORY LACTARIUS

FIG. 8-16
CANTHARELLUS AURANTIACUS FR.
ORANGE CHANTARELLE

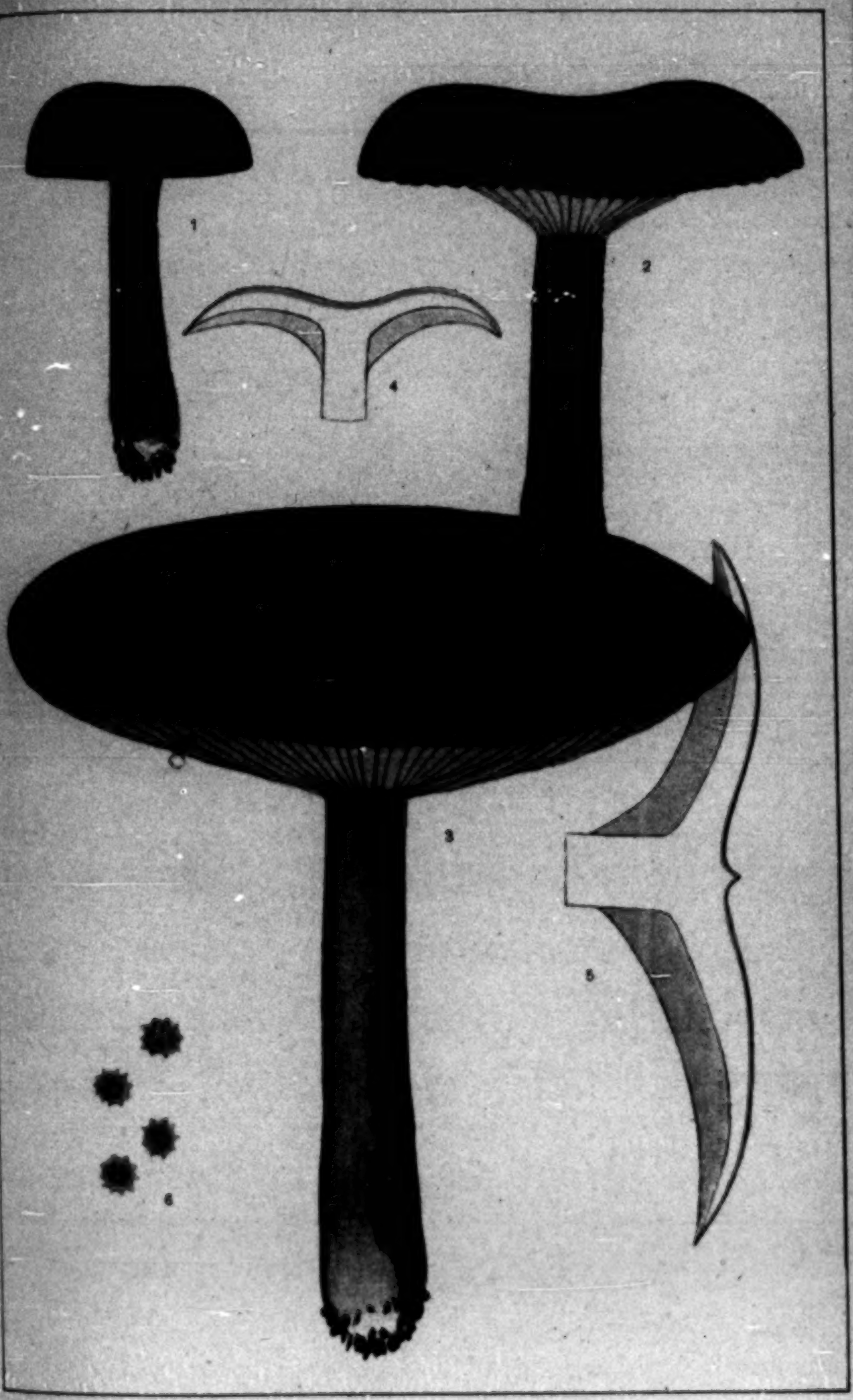
Plate 123

Lactarius lignyotus Fr.

SOOTY LACTARIUS

1 Young plant
2 Plant of medium size showing crenate and striate margin of cap
3 Large plant with fully expanded cap showing a small umbo and irregular radiating ridges; also discolored wound of gills and drop of milk issuing from it
4 Vertical section of upper part of a young plant
5 Vertical section of upper part of a mature plant
6 Four spores x 400

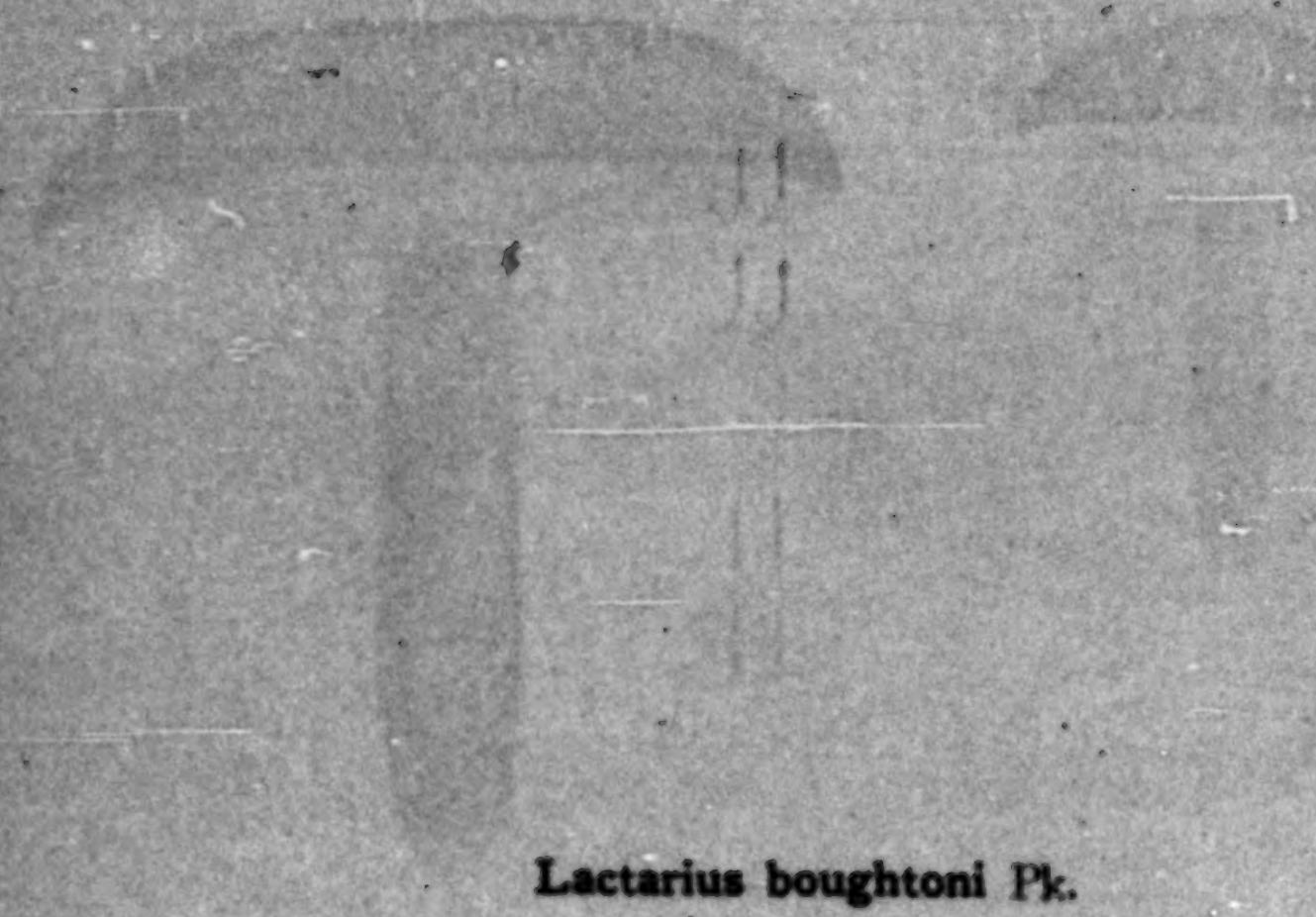
EDIBLE FUNGI



LACTARIUS LIGNYOTUS Fr.

SOOTY LACTARIUS

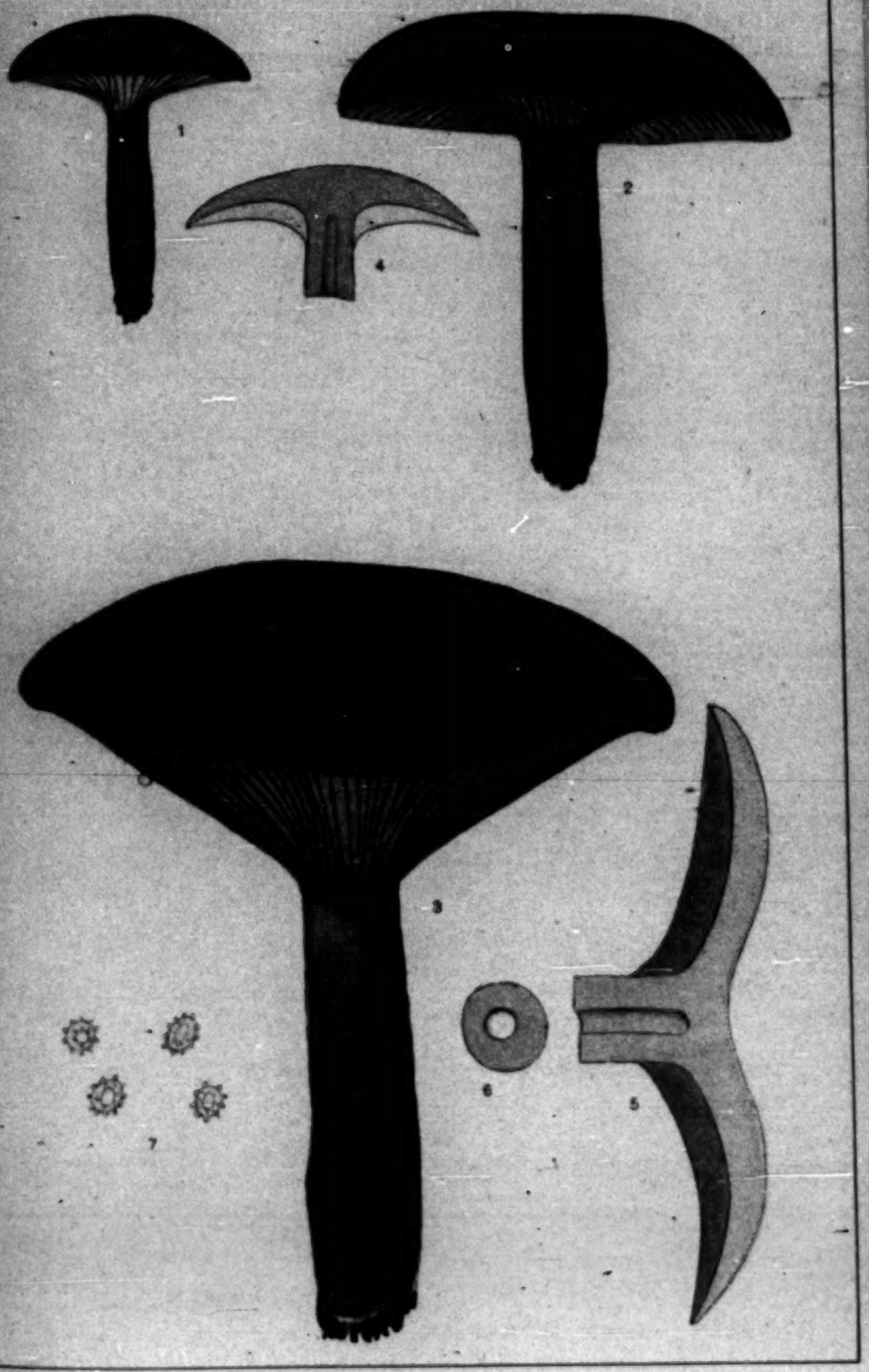
Plate IV



Lactarius boughtoni Pk.

BOUGHTON LACTARIUS

1 Young plant
2 Middle-aged plant
3 Mature plant
4 Vertical section of upper part of a young plant
5 Vertical section of upper part of a mature plant
6 Transverse section of a stem
7 Four spores x 400



LACTARIUS BOUGHTONI Pk.

BOUGHTON LACTARIUS

Plate VI

Cortinarius croceofolius Pk.

SAFFRON-GILLED CORTINARIUS

1 Young plant
2 Middle-aged plant
3–4 Mature plants
5 Vertical section of upper part of a young plant
6 Vertical section of upper part of a mature plant
7 Transverse section of a stem
8 Four spores x 400

Clitocybe bifornis Pk.

TWO-FORMED CLITOCYBE

9 Young plant
10 Middle-aged plant
11 Mature plant showing more highly colored cap and gills
12 Mature plant with eccentric stem
13 Vertical section of upper part of a middle-aged plant
14 Vertical section of upper part of a mature plant with eccentric stem
15 Four spores x 400

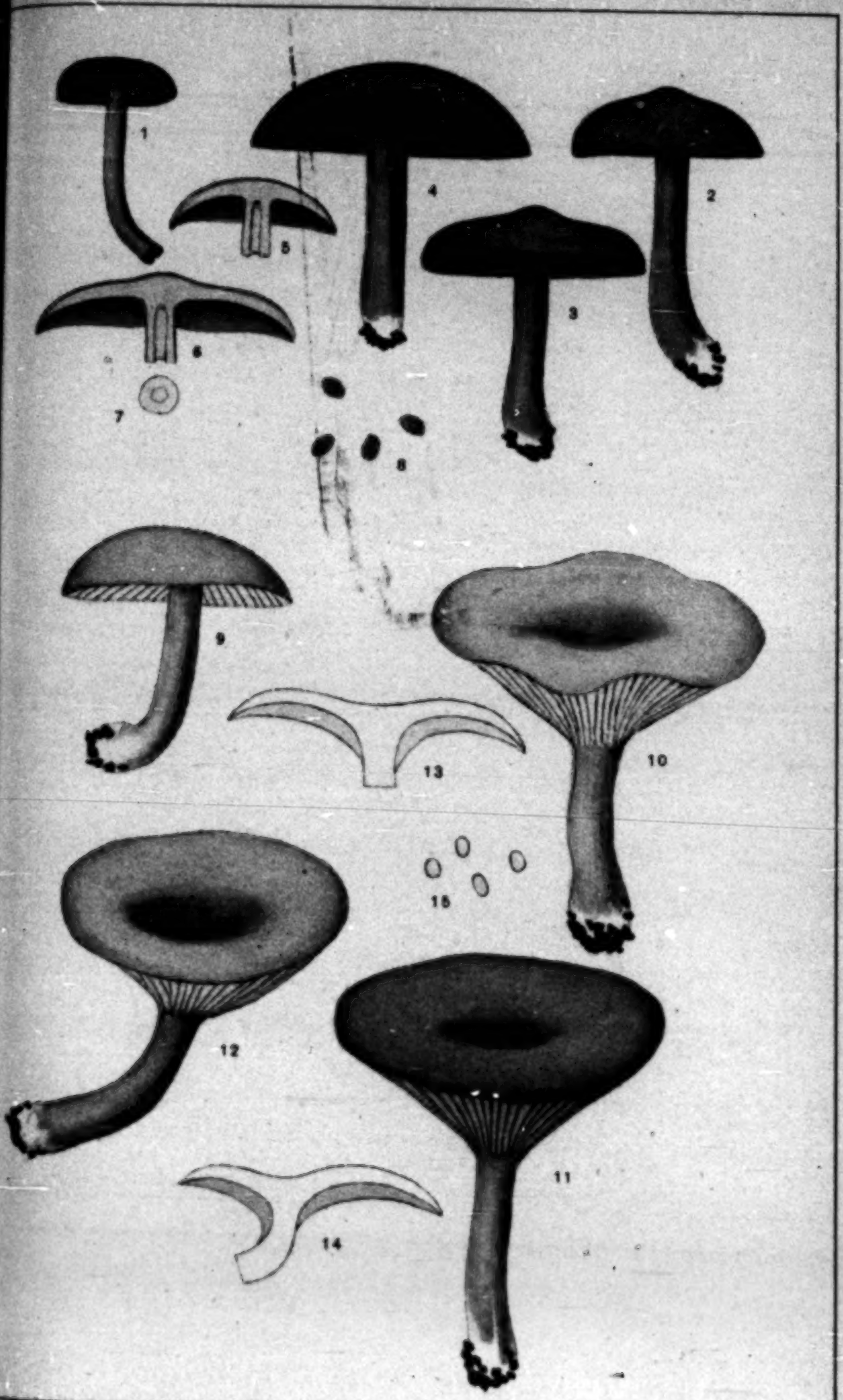


FIG. 1-8
CORTINARIUS CROCEOFOLIUS PK.
SAFFRON GILLED CORTINARIUS

FIG. 9-15
CLITOCYBE BIFORMIS PK.
TWO FORMED CLITOCYBE

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New York State Museum

JOHN M. CLARKE, Director.
CHARLES H. PECK, State Botanist

Museum Bulletin 157

1911

REPORT OF STATE BOTANIST 1911

Dr John M. Clarke, Director of the State Museum:

I have the honor of submitting the following report of work done in the botanical section of the State Museum during the past year.

Specimens of plants for the State herbarium have been collected in the counties of Albany, Essex, Lewis, Oneida, Otsego, Rensselaer, Saratoga, Steuben and Warren.

Specimens have been contributed by correspondents and others that were collected in the counties of Albany, Cattaraugus, Columbia, Cortland, Franklin, Fulton, Greene, Herkimer, Jefferson, Monroe, New York, Oneida, Onondaga, Ontario, Orange, Orleans, Queens, Rensselaer, Richmond, Schenectady, Suffolk, Tompkins, Warren, Washington and Westchester.

Extralimital specimens have been contributed that were collected in Alaska, California, Canada, Colorado, Connecticut, Cuba, Delaware, District of Columbia, Europe, Florida, Indiana, Kansas, Maryland, Massachusetts, Michigan, Minnesota, Nebraska, New Jersey, Ohio, Oregon, Utah, Vermont and Washington.

The number of species of which specimens have been added to the herbarium is 283 of which 100 were not before represented in it. Of these, 28 are new or hitherto undescribed species. All of these are fungi.

A list of the names of the added specimens is marked "Plants added to the Herbarium."

The number of those who have contributed specimens is 74. This includes those who sent specimens merely for identification, if the specimens were collected in our State and were in such condition

and of such character as to make them desirable additions to the herbarium. The number of persons for whom identifications have been made is 162. The number of identifications made is 1915.

A list of the names of contributors and of their respective contributions is marked "Contributors and their contributions."

The names of species new to our flora with their localities, time of collecting and remarks concerning them will be found in a chapter marked "Species not before reported." This includes species which may have been reported before as varieties of other species but which now are regarded as distinct species. Also descriptions of those regarded as new species.

New localities of rare plants, new varieties and any facts of interest that may have been observed are given under the title "Remarks and observations."

Many specimens of fungi collected outside of our State have been received for determination. When no description could be found to correspond to their characters they have been considered new species and names given to them and descriptions of them written. These will be found under the heading "New species and varieties of extralimital fungi."

Eight species and varieties of mushrooms have been tested for their edible qualities and approved. These added to those already known make the number of New York edible species and varieties of mushrooms now known, 213.

One species previously reported as edible was found by Mr F. C. Stewart to have a bitter taste. It is the rooted collybia, Collybia radicata (Relh.) Fr. In my trials of this species for its edibility no such flavor was observed. At my request Mr Stewart sent me specimens of this mushroom gathered in the locality from which the bitter ones came. These were cooked in the same manner as in my former trials. Their bitter flavor was verified: but no evil consequences resulted. It has been learned in this case that some mushrooms, as well as apples and other fruits, may vary in flavor. When the bitter taste is mild it is not a serious objection to their edibility provided it is not distasteful to the eater and no evil consequences follow. Dandelions cooked as a pot-herb often have a decidedly bitter flavor which to some persons is not at all objectionable and may even be considered as valuable because indicating tonic properties.

Two trips have been made in my efforts to locate and investigate the chestnut bark disease. Having learned by report that this

disease was supposed to have attacked the chestnut trees about Cooperstown, that locality was visited and under the guidance of one familiar with the locality and interested in the woodland supposed to be affected, a careful search for it was made. No evidences of the presence of the fungus that causes the chestnut bark disease were found either in the standing trees or in the branches, stumps and young shoots of trees that had been cut because they were supposed to have been attacked by it. The real cause of the trouble was not satisfactorily ascertained, but it seemed probable that the severe drouths of three preceding seasons may have contributed to the trouble.

Having heard that the disease was advancing northward from New York City through the counties along the east bank of the Hudson river, and had already reached Columbia county, a visit was made to the town of Sand Lake in Rensselaer county. Chestnut trees are common in the woods of that region but my efforts to find there any evidences of the fungus that causes the chestnut bark disease were wholly unsuccessful. Subsequent investigations by others have indicated its presence in both the southern and northern part of the county. In this case as in others a new attack appears to have been made in places widely separated from any others. In this respect the disease is specially dangerous, the germs or spores being evidently carried by insects, birds or some other agent than winds. It is therefore of the utmost importance that a close watch be kept for the appearance of the disease wherever chestnut trees abound and that trees found affected by it should be cut and their bark burned as soon as possible. The spread of the disease has been so rapid and its work so virulent during the two years past that constant watchfulness and prompt action whenever it appears are essential to its suppression. It is probable that this destructive outbreak of this remarkable disease is sporadic and brought about by an unusual combination of favoring circumstances and will not long continue to be so destructive. Nature generally finds some way to check such extraordinary action and restore the equilibrium of her forces, but sometimes the proper conditions are not restored till after great damage has been done. It will not do therefore to sit quietly down and wait for such a consummation. We may by prompt and judicious action aid the natural processes and thereby diminish and shorten the ravages of the evil.

In continuance of my investigation of the marsh flora of the Adirondacks, Peacock marsh in the town of North Elba was visited. It is located about three miles south of Lake Placid and nearly east

from Averyville. The visit was made in June and owing to the early time in the season it is probable that some plants which occur later were not seen. A list of those seen will be found in the chapter designated "Remarks and observations."

It is interesting to note the seasonal influences on plants and their similar results on our cultivated plants and wild mushrooms. In the eastern part of the State the prevailing low temperature in the spring retarded the development of vegetation and kept back the blossoming of the early varieties of fruit trees. Then a somewhat abrupt change to warmer weather caused these and later varieties to blossom more nearly simultaneously than usual. The early Richmond cherry and the Montmorency commonly have an interval of about ten days between their times of flowering. This year that interval was only two or three days. Pear trees, plum trees and cherry trees were in blossom nearly at the same time and apple trees quickly succeeded them. The resulting fruit crop was abundant and matured early. In midseason a long period of dry hot weather kept back the development of those species of mushrooms that commonly appear at this time of the year. It was a rare thing to find one. They were extremely scarce even in swamps and wet places. Several correspondents wrote that they never before knew mushrooms to be so scarce. One correspondent says, "On account of the drouth this has been the poorest season for fungi I have known in twenty-five years. Not a single morel could I find." This condition continued longer in some places than in others. Where plenteous rains came toward the end of the season mushrooms began to appear. In the vicinity of New York City rain fell abundantly during a whole week. This effectually broke the drouth and soon a crop of mushrooms began to appear. Summer and autumn species came up together and by their great variety and united numbers made such a crop as is rarely seen. In some places the ground appeared as if it was almost covered with them.

One correspondent says, "the Long Island woods are full of mushrooms. It seems that almost every step reveals some different species." Others represent their abundance as so great that they could be gathered by the bushel. One says that a friend who had been out collecting mushrooms brought in half a bushel of Tricholoma personatum Fr. This abundance has extended to other states than our own and has induced people to gather them for food more freely and in greater quantity than usual. As a consequence more accidents and deaths from eating poisonous mush-

rooms have been reported than usual. In New York City and vicinity it is reported that more than thirty deaths from this cause have taken place. It is affirmed however that nearly all these were among foreign born people who have doubtless mistaken poisonous species for the European species they were accustomed to eat in their own country. Native American people generally have a proper sense of the danger of rashly eating mushrooms whose edible qualities are unknown to them and are prudent enough to avoid doing it. In European countries the ignorant are to some extent protected from such danger by an inspector of the markets who permits to be sold only those mushrooms known to be edible.

It is possible that poverty combined with the high cost of living may have been a source of danger in some cases of mushroom poisoning. An instance was reported to me of a poor family in which the mother and two children were poisoned. The mother recovered but the children died. An enthusiastic mycologist living in the vicinity of the place where this accident occurred began an investigation of the case in an attempt to learn what mushroom caused the sickness. Enough was learned from the mother to indicate that the mushroom chiefly eaten was one known by the name autumn pholiota, Pholiota autumnalis Pk. This was not known to mycologists to be an unwholesome species, but apparently impelled by hunger the family had collected a considerable quantity of it, cooked and ate it. The mother ate about a pint, the boy about the same quantity and the girl somewhat less. All were made sick and after several hours delay a physician was called. The result was as above stated. The flavor of the mushroom is not specially enticing and I can see no reason why they should have eaten so much of it unless they were impelled by hunger. An excessive quantity of a good mushroom may be harmful, but of a bad one it would be still worse. The mycologist who investigated the case learned by subsequent experiment that this is a noxious species and though it may not always be fatal it should be rigidly avoided. It is at least unwholesome.

Besides the abundance of the crop caused by the concentration of summer and autumn species the appearance at such a time of species not before recorded as growing out of season is remarkable. Morels are among the most constant spring and early summer growers. I have not before known them to appear at any other time. One correspondent writing after the morel season had passed says, "I have not been able to find a single morel this season." My own experience was similar to his. Evidently the cold spring time

See 1907 Report Pholiota

immediately followed by dry weather suppressed the crop of morels. The moderately warm and moist fall weather, however, gave opportunity for a crop of morels in a limited station near Boston, Mass. Specimens were collected and some of them sent to me by Mrs U. C. Sherman with the inquiry if it was not unusual for morels to appear in autumn. An examination of them showed a very close relationship to the conic morel. They differed in a few minor characters from the conic morel, Morchella conica Pers., but most of all in their time of appearance. This is probably due to the peculiar weather conditions of this season, nevertheless it seemed best in view of the minor differences and the very unusual time of its appearance to designate it by the varietal name which will be found in its proper place in this report.

Some seasons seem to be specially favorable to the development of the species of certain genera. In one season species of Hygrophorus will be abundant, in another many species of Lepiota will be seen and in another, species of Lactarius will appear to be unusually common. This year specimens of more species of Tricholoma have been received by me from correspondents during September, October and November than in any other previous year. This indicates to me that the latter part of the season has been unusually favorable to the development of species of Tricholoma.

The custom of issuing generic monographs of New York species has been continued. Revised descriptions of New York species of the genera Clitocybe, Laccaria and Psilocybe have been prepared and arranged as far as practicable according to the Friesian system as given in Sylloge.

To meet the requirements of the rules of the International Botanical Congress of 1905 Latin descriptions of the new species and varieties herein reported have been written.

My assistant, Mr S. H. Burnham, has performed his clerical duties with noteworthy faithfulness, doing all the typewriting of the office, attending to the arrangement, mounting and labeling of specimens, aiding in the identification of specimens sent for that purpose, and in conducting the correspondence. In addition to this he has improved his opportunities during holiday and vacation periods in collecting specimens and in making many valuable additions to the herbarium.

Respectfully submitted

CHARLES H. PECK

State Botanist

Albany, December 28, 1911

PLANTS ADDED TO THE HERBARIUM

New to the herbarium

Acer carolinianum *Walt.*
Aecidium atriplicis *Shear*
Anthyllis vulneraria *L.*
Armillaria pinetorum *Gill.*
Artemisia frigida *Willd.*
A. gnaphalodes *Nutt.*
Ascochyta imperfecta *Pk.*
A. rhei *E. & E.*
Boletus ballouii *Pk.*
Camarosporium maclurae *Pk.*
Centaurea maculosa *Lam.*
Cercospora medicaginis *E. & E.*
Cercosporella terminalis. *Pk.*
Clavaria subtilis *Pers.*
Clitocybe fumosa brevipes *Pk.*
C. hirneola *Fr.*
C. sinopicoides *Pk.*
C. splendens (*Pers.*) *Fr.*
C. tuba *Fr.*
C. tumulosa *Kalchb.*
Coniothecium chomatosporium *Cd.*
Coprinus domesticus (*Pers.*) *Fr.*
Coronospora angustata *Fckl.*
Cortinarius albidipes *Pk.*
C. phyllophilus *Pk.*
C. purpurascens *Fr.*
Coryneum disciforme *K. & S.*
Cytospora rhoina *Fr.*
C. salicis (*Cd.*) *Rabenh.*
Dasyscypha sulphuricolor *Pk.*
Deutzia scabra *Thunb.*
Diplodia spiraeina *Sacc.*
Diplodina medicaginis *Oud.*
Flammula sulphurea *Pk.*
Fusarium pirinum (*Fr.*) *Sacc.*
Ganoderma sessile *Murr.*
Gloeosporium valsoideum *Sacc.*
Gutierrezia sarothra (*Pursh*) *B. & R.*
Gymnolomia multiflora (*Nutt.*) *B. & H.*
Haplosporella ribis *Sacc.*
Hebeloma sinapizans *Fr.*
Helvella capucinoides *Pk.*
Hendersonia grossulariae *Oud.*
Hydnellum peckii *Banker*
Hygrophorus recurvatus *Pk.*
Hygrophorus sordidus *Pk.*
Leptosphaeria distributa (*C. & E.*)
Marasmius epiphyllus *Fr.*
Melanconis alni *Tul.*
Mycena atroumbonata *Pk.*
Mycena metata *Fr.*
Naucoria arenaria *Pk.*
Oenothera muricata *L.*
Omphalia offuciata *Fr.*
Ophiotheca vermicularis (*Schw.*)
Peniophora tenuissima *Pk.*
Periconia pycnospora *Fres.*
Peronospora trifoliorum *DeBy.*
Pestalozzia adusta *E. & E.*
P. funerea *Desm.*
P. longiseta *Speg.*
Phacidium lignicola *Pk.*
Pholiota rigidipes *Pk.*
Phoma amorphae *Pk.*
P. bacteriophila *Pk.*
P. leprosa *Pk.*
P. smilacis *B. & J.*
Physcia granulifera (*Ach.*) *Tuck.*
Polyporus melanopus *Fr.*
Polysaccum pisocarpium *Fr.*
Psilocybe fuscofolia *Pk.*
P. polycephala (*Paul.*)
Poria pulchella *Schw.*
Ramularia karstenii *Sacc.*
Rubus glandicaulis *Blanch.*
Sagedia cestrensis *Tuck.*
Septoria aquilegiae *P. & S.*
S. dianthi *Desm.*
S. malvicola *E. & M.*
S. mirabilissima *Pk.*
Sphaeronema minutulum *D. Sacc.*
Sphaeropsis amorphae *E. & B.*
S. maclurae *Cke.*
Spongipellis occidentalis *Murr.*
Stagonospora carpathica *Baeuml.*
Steccherinum peckii *Banker*
Steganosporium fenestratum (*E. & E.*)
Stigmina populi (*E. & E.*) *Pk.*
Teichospora trimorpha *Atk.*
Thyridium pallidum *E. & E.*

Tricholoma boreale *Fr.*
T. planiceps *Pk.*
T. subsaponaceum *Pk.*
T. subsejunctum *Pk.*
Trimmatostroma salicis *Cd.*
Uromyces spartinae *Farl.*
Ustilago hypodytes (*Schl.*) *Fr.*
Verbena stricta *Vent.*
Vermicularia hysteriiformis *Pk.*
Volutella buxi (*Cd.*) *Berk.*

Not new to the herbarium

Acalypha virginica *L.*
Agaricus abruptibulbus *Pk.*
A. placomyces *Pk.*
A. subrufescens *Pk.*
Amaranthus crispus (*L. & T.*) *A. Br.*
Amelanchier oligocarpa (*Mx.*)
Andromeda glaucophylla *Link*
Andropogon furcatus *Muhl.*
Anthostoma gastrina (*Fr.*) *Sacc.*
Anychia dichotoma *Mx.*
Arctium minus (*Hill.*) *Bernh.*
Arabis drummondii *Gray*
Belonidium aurelia (*Pers.*) *DeNot.*
Bidens cernua *L.*
Boletus albidipes *Pk.*
B. speciosus *Frost*
Botrychium obliquum *Muhl.*
B. simplex *E. Hitchc.*
Calocera viscosa (*Pers.*) *Fr.*
Calvatia gigantea (*Batsch*)
Cantharellus aurantiacus *Fr.*
Centaurea nigra radiata *DC.*
Cichorium intybus *L.*
Claudopus nidulans (*Pers.*) *Pk.*
Clavaria crassipes *Pk.*
Clitocybe candicans *Pers.*
C. clavipes (*Pers.*) *Fr.*
C. nebularis (*Batsch*) *Fr.*
C. sudorifica *Pk.*
Coccomyces juniperi *Karst.*
Collema pulposum (*Bernh.*) *Ach.*
Collybia albipilata *Pk.*
C. butyracea *Bull.*
C. familia *Pk.*
C. radicata (*Relh.*) *Fr.*
C. tuberosa *Bull.*
Coniophora puteana (*Schum.*) *Fr.*
Convolvulus arvensis *L.*
Corallorrhiza trifida *Chat.*
Corticium martianum *B. & C.*
Corynieum pustulatum *Pk.*
Crataegus helderbergensis *S.*
Cryptogramma stelleri (*Gmel.*)
Cynosurus cristatus *L.*
Cytospora microspora (*Cd.*) *Rabenh.*
Datura stramonium *L.*
Dendrophoma tiliae *Pk.*
Dentaria diphylla *Mx.*
Dicentra canadensis (*Goldie*)
Didymium squamulosum (*A. & S.*)
Drosera rotundifolia *L.*
Durella corrugata (*C. & P.*) *Sacc.*
Entoloma grayanum *Pk.*
Epilobium molle *Torr.*
Epipactis tesselata (*Lodd.*)
Eragrostis frankii (*F. Mey. & L.*)
Euphorbia corollata *L.*
Flammula alnicola *Fr.*
F. pulchrifolia *Pk.*
Fomes conchatus (*Pers.*) *Fr.*
F. fomentarius (*L.*) *Fr.*
F. pinicola (*Sw.*) *Fr.*
F. roseus (*A. & S.*) *Fr.*
Fraxinus pennsylvanica *Marsh.*
Fuligo septica (*Link*) *Gmel.*
Galera reticulata *Pk.*
Galium trifidum *L.*
Geopyxis hesperidea *C. & P.*
Gloniopsis australis (*Duby*) *Sacc.*
Grindelia squarrosa (*Pursh*)
G. squar. nuda (*Wood*)
Habenaria ciliaris (*L.*) *R. Br.*
Helvella macropus (*Pers.*) *Karst.*
Hibiscus trionum *L.*
Hirneola auricula-judae (*L.*)
Hydnum caput-ursi *Fr.*
H. coralloides *Scop.*
H. erinaceus *Bull.*
H. subfuscum *Pk.*
Hygrophorus min. subluteus *Pk.*
Hymenochaete tabacina (*Sow.*) *Lev.*
Hypholoma boughtoni *Pk.*
H. rigidipes *Pk.*
H. subl. squamosum *Chr.*

Hypoxylon serpens (*Pers.*) *Fr.*
Irpex lacteus *Fr.*
Juncus brevicaudatus (*Engelm.*)
Laccaria striatula (*Pk.*)
Lachnea hemisphaerica pusilla *Pk.*
Lactarius cinereus *Pk.*
L. minusculus *Burl.*
L. rimosellus *Pk.*
Lentinus lepideus *Fr.*
Lenzites sepiaria *Fr.*
Lespedeza procumbens *Mx.*
Linnaea bor. americana (*Forbes*)
Lonicera tatarica *L.*
L. xylosteum *L.*
Lycoperdon pusillum *Batsch*
Lyonia ligustrina (*L.*) *DC.*
Lysimachia punctata *L.*
L. thyrsiflora *L.*
Macrosporium tomato *Cke.*
Marasmius spongiosus *B. & C.*
Mentha gentilis *L.*
Merulius fugax *Fr.*
M. tremellosus *Schrad.*
M. ulmi *Pk.*
Monilia peckiana *S. & V.*
Mollisia melaleuca (*Fr.*) *Sacc.*
Mutinus caninus (*Huds.*) *Fr.*
Mycena clavicularis *Fr.*
M. pseudopura *Cke.*
M. pura *Pers.*
M. sanguinolenta *A. & S.*
M. vulgaris (*Pers.*) *Fr.*
Mycosyrinx osmundae *Pk.*
M. osm. cinnamomeae *Pk.*
Naucoria vernalis *Pk.*
Osmunda cin. bipinnatifida *Clute*
Panaeolus retirugis *Fr.*
Penicillium glaucum *Link*
Phlebia pileata *Pk.*
Pholiota adiposa *Fr.*
P. autumnalis *Pk.*
P. comosa *Fr.*
P. discolor *Pk.*
P. praecox *Pers.*
P. vermiflua *Pk.*
Physcia hypoleuca (*Muhl.*) *Tuck.*
Pleurotus porrigens *Pers.*
Poa compressa *L.*
Polygonum hydropiper *L.*
Polyporus admirabilis *Pk.*
Polyporus albellus *Pk.*
P. benzoinus (*Wahl.*) *Fr.*
P. brumalis (*Pers.*) *Fr.*
P. delectans *Pk.*
P. fragrans *Pk.*
P. frondosus *Fr.*
P. giganteus (*Pers.*) *Fr.*
P. umbellatus *Fr.*
Polystictus parvulus *Kl.*
Propolis faginea (*Schrad.*) *Karst.*
Quercus prinoides *Willd.*
Rhytisma acerinum (*Pers.*) *Fr.*
R. vitis *Schw.*
Roestelia aurantiaca *Pk.*
Rosellinia mutans (*C. & P.*) *Sacc.*
Rubus canadensis *L.*
R. sativus (*Bail.*) *Brainerd*
Russula purpurina *Q. & S.*
Rynchospora fusca (*L.*) *Ait. f.*
R. glomerata (*L.*) *Vahl*
Scirpus cyp. condensatus *Fern.*
Scleroderma geaster *Fr.*
Smilacina trifolia (*L.*) *Desf.*
Solenia ochracea *Hoffm.*
Solidago juncea ramosa *P. & B.*
Sphaeropsis biformis *Pk.*
S. persicae *E. & B.*
Stenophyllus capillaris (*L.*) *Britt.*
Stereum acerinum nivosum *Rav.*
S. radiatum reflexum *Pk.*
S. spadiceum *Fr.*
Streptothrix fusca *Cd.*
Stropharia aeruginosa (*Curt.*) *Fr.*
Symplocarpus foetidus (*L.*) *Nutt.*
Taraxacum officinale *Weber*
Tipularia discolor (*Pursh*) *Nutt.*
Tricholoma album (*Schaeff.*) *Fr.*
T. eques. albipes *Pk.*
T. personatum *Fr.*
T. resplendens *Fr.*
Trichothecium roseum (*Pers.*) *Link*
Trichostema dichotomum *L.*
Valsa linderae *Pk.*
V. rhoöphila *C. & E.*
Vernonia altissima *Nutt.*
Viola blanda *Willd.*
V. cucullata *Ait.*
V. pallens (*Banks*) *Brainerd*
Xyris caroliniana *Walt.*

CONTRIBUTORS AND THEIR CONTRIBUTIONS

Miss L. C. Allen, Newtonville, Mass.
Lepiota farinosa *Pk.*

Mrs C. Beach, Catskill
Cryptogramma stelleri (*Gmel.*) *Prantl*

Miss F. Beckwith, Rochester

Anthyllus vulneraria *L.*
Artemisia frigida *Willd.*
A. gnaphalodes *Nutt.*
Grindelia squarrosa nuda (*Wood*)
Gutierrezia sarothra (*Pursh*) *B. & R.*
Gymnolomia multiflora (*Nutt.*) *B.&H.*
Veronica virginica *L.*

Mrs E. B. Blackford, Boston, Mass.
Collybia atrata *Fr.*

Mrs R. C. Burnham, Hudson Falls
Agaricus subrufescens *Pk.*

Miss M. C. Burns, Middleville
Vernonia altissima *Nutt.*

Miss J. F. Conant, Melrose, Mass.

Hydnum laevigatum *Sw.*
Morchella conica serotina *Pk.*

Mrs G. E. Duryee, Schenectady
Agaricus campester majusculus *Pk.*

Mrs E. P. Gardner, Canandaigua

Arabis drummondii *Gray*
Oenothera muricata canescens (*T. & G.*)
Oenothera muricata *L.*
O. oakesiana *Robbins*

Mrs L. L. Goodrich, Syracuse
Centaurea nigra radiata *DC.*

Miss C. C. Haynes, New York

Astrella tenella (*L.*) *Bv.*
Cololejeunea jooriana (*Aust.*)
Reboulia hemisphaerica (*L.*)
Riccia americana *M. A. Howe*
Riccia arvensis *Aust.*
Ricciocarpus natans terrestris *Lindb.*
Scapania uliginosa *Lindb.*
Targonia hypophylla *L.*

Miss A. Hibbard, West Roxbury, Mass.
Tricholoma piperatum *Pk.*

Mrs M. A. Knickerbocker, San Francisco, Cal.

Astragalus watsonianus (*Ktze.*)
Ephedra nevadensis *Wats.*
Lewisia rediviva *Pursh*

Mrs M. Miller, Boonville
Rhytisma acerinum (*Pers.*) *Fr.*

Misses M. L. Overacker and I. S. Lawrence, Syracuse
Claudopus nidulans (*Pers.*) *Pk.*

Mrs F. W. Patterson, Washington, D. C.
Hygrophorus sordidus *Pk.*

Mrs J. H. Poor, New York
Volutella buxi (*Cd.*) *Berk.*

Mrs U. C. Sherman, Roslindale, Mass.
Morchella conica serotina *Pk.*

Miss E. H. Smith, Berkeley, Cal.
Septoria populi *Desm.*

Miss E. C. Webster, Canandaigua

Clitocybe fumosa brevipes *Pk.*
C. sudorifica *Pk.*
Cortinarius purpurascens *Fr.*
Cynosurus cristatus *L.*
Flammula sulphurea *Pk.*
Hebeloma sinapizans *Fr.*
Helvella crispa (*Scop.*) *Fr.*
Hieracium murorum *L.*
Hygrophorus recurvatus *Pk.*
Hypholoma perplexum *Pk.*
Lysimachia thyrsiflora *L.*
Mycena metata *Fr.*
Pholiota squarrosa *Muell.*

F. H. Ames, Brooklyn
Boletus vermiculosus spraguei (*Frost*) *Pk.*

J. C. Arthur, Lafayette, Ind.
Aecidium kellermanni *DeToni*

G. F. Atkinson, Ithaca
Teichospora trimorpha *Atk.*

G. G. Atwood, Albany

Irpex tulipiferae *Schw.*
Peridermium pyriforme *Pk.*

W. H. Ballou, New York

Boletus auriflammeus *B. & C.*
B. ballouii *Pk.*
Clitocybe fumosa brevipes *Pk.*
C. illudens *Schw.*
Entoloma batschianum *Fr.*
Fistulina hepatica *Fr.*
Fomes pinicola (*Sw.*) *Fr.*
Ganoderma sessile *Murr.*
Gloeoporus conchoides *Mont.*
Lactarius rimosellus *Pk.*
Lentinus spretus *Pk.*
Peridermium cerebrum *Pk.*
Polyporus albellus *Pk.*
P. flavovirens *B. & R.*
P. frondosus *Fr.*
P. umbellatus *Fr.*
Polystictus parvulus *Kl.*
Psilocybe fuscofolia *Pk.*
Steccherinum ballouii *Banker*
Stropharia coronilla *Bull.*

H. J. Banker, Greencastle, Ind.
Acalypha virginica *L.*

E. Bartholomew, Stockton, Kan.

Alternaria brassicae phaseoli *Brun.*
Amanitopsis vaginata alba *Stev.*
Camarosporium berkeleyanum *Lev.*
Camptoum cuspidatum *Cke. & Hark.*
Cercospora circumscissa *Sacc.*
C. eustomae *Pk.*
C. henningsii *Allesch*
C. pastinaceae (*Sacc.*) *Pk.*
Cercosporella mirabilis *Pk.*
Cladosporium aromaticum *E. & E.*
C. gloeosporoides *Atk.*
Coryneum sorbi *Pk.*
Cytospora foliicola *Libert*
Dermatea mori *Pk.*
Diaporthe inornata *Pk.*
Diplodia polygonicola *Pk.*
Exobasidium vaccinii (*Fckl.*)*Woron.*
Gloeosporium psoraleae *Pk.*
Graphyllum chloes junci *Pk.*
Haplosporella ailanthi *E. & E.*
Helotium citrinum (*Hedw.*) *Fr.*
Hendersonia rosae *Kickx.*
Henningsinia caespitosa *Pk.*
Hysterium cubense *Pk.*
Leptostromella scirpina *Pk.*
Macrophoma burserae *Pk.*
M. numerosa *Pk.*
Melanconium betulinum *S. & K.*
Ovularia avicularis *Pk.*
Phoma roystoneae *Pk.*
Pyrenophora depressa *Pk.*
Ramularia macrospora asteris *Sacc.*
Rhytidhysterium guaraniticum *Speg.*
Rosellinia bigeloviae roystoneae *Pk.*
Septonema spilomeum *Berk.*
Septoria apii *Chester*
S. ficarioides *Pk.*
S. magnospora *Pk.*
S. purpurascens *E. & M.*
S. solanina *Speg.*
Sphaeropsis smilacis *E. & E.*
Thelephora sullivantii *Mont.*
Uromyces pictus *Thuem.*
Valsa ceratophora *Tul.*

J. M. Bates, Red Cloud, Neb.

Cercospora gymnocladii *E. & K.*
Puccinia silphii *Schw.*
Ramularia pruinosa *Speg.*
Septoria gramineum *Desm.*

M. S. Baxter, Rochester

Antennaria neglecta *Greene*
Antennaria neodioica *Greene*
Antennaria plantaginifolia (*L.*) *Rickards.*

F. S. Boughton, Pittsford

Cantharellus aurantiacus *Fr.*
Clavaria stricta *Pers.*
C. tsugina *Pk.*
Flammula sulphurea *Pk.*
Galera reticulata *Pk.*
Hypholoma rigidipes *Pk.*
Omphalia oculus *Pk.*
Pholiota confragosa *Fr.*
Polyporus ovinus (*Schaeff.*) *Fr.*
Stropharia aeruginosa (*Curt.*)

F. J. Braendle, Washington, D. C.

Bovistella ohiensis *E. & M.*
Hygrophorus sordidus *Pk.*
Polyporus volvatus *Pk.*
Tricholoma columbetta *Fr.*
Tricholoma melaleucum (*Pers.*) *Fr.*

C. E. Brand, Norwich, Conn.

Lepiota farinosa *Pk.*

S. H. Burnham, Hudson Falls

Agaricus subrufescens *Pk.*
Amaranthus crispus (*L. & T.*) *A. Br.*
Anthostoma gastrina (*Fr.*) *Sacc.*
Anychia dichotoma *Mx.*
Arctium minus (*Hill.*) *Bernh.*
Boletus speciosus *Frost*

Cephalozia lunulaefolia *Dum.*
Clavaria crassipes *Pk.*
Clitocybe candicans *Pers.*
C. clavipes (*Pers.*) *Fr.*
C. nebularis (*Batsch*) *Fr.*
C. sudorifica *Pk.*
Convolvulus arvensis *L.*
Coryneum disciforme *K. & S.*
Cytospora microspora (*Cd.*) *Rabenh.*
C. rhoina *Fr.*
Datura stramonium *L.*
Deutzia scabra *Thunb.*
Diplodia spiraeina *Sacc.*
Eragrostis frankii (*F. Mey. & L.*)
Euphorbia corollata *L.*
Flammula alnicola *Fr.*
F. pulchrifolia *Pk.*
Fomes fomentarius (*L.*) *Fr.*
F. roseus (*A. & S.*) *Fr.*
Ganoderma sessile *Murr.*
Hibiscus trionum *L.*
Hirneola auricula-judae (*L.*) *Berk.*
Laccaria striatula (*Pk.*)
Lentinus lepideus *Fr.*
Lespedeza procumbens *Mx.*
Lonicera xylosteum *L.*
Mentha gentilis *L.*
Mycena vulgaris (*Pers.*) *Fr.*
Mycosyrinx osmundae *Pk.*
M. osm. cinnamomeae *Pk.*
Osmunda cinn. bipinnatifida *Clute*
Phlebia pileata *Pk.*
Pholiota autumnalis *Pk.*
Phoma amorphae *Sacc.*
Physcia granulifera (*Ach.*) *Tuck.*
Plagiothecium deplanatum (*Schimp.*)
Polyporus admirabilis *Pk.*
P. delectans *Pk.*
P. fragrans *Pk.*
P. melanopus *Fr.*
P. picipes *Fr.*
P. underwoodii *Murr.*
Poria pulchella *Schw.*
Quercus prinoides *Willd.*
Sphaeropsis amorphae *E. & B.*
S. biformis *Pk.*
S. maclurae *Cke.*
Spongipellis occidentalis *Murr.*
Stereum radiatum reflexum *Pk.*
S. spadiceum *Fr.*
Thyridium pallidum *E. & E.*
Tricholoma album (*Schaeff.*) *Fr.*
T. boreale *Fr.*
T. resplendens *Fr.*

H. W. Clute, Gloversville
Corallorrhiza maculata flavida *Pk.*

M. T. Cook, New Brunswick, N. J.
Trichoderma koningi *Oud.*

S. W. Cowles, Marietta
Silene dichotoma *Ehrh.*

J. A. Crabtree, Montgomery
Grindelia squarrosa (*Pursh*) *Dunal*

S. Davis, Brookline, Mass.
Clavaria peckii *Sacc.*
Entoloma flavifolium *Pk.*
E. grayanum *Pk.*
E. subtruncatum *Pk.*
Leptoglossum luteum (*Pk.*) *Sacc.*
Leptonia davisiana *Pk.*
Pilosace eximia *Pk.*
Tricholoma terraeolens majus *Pk.*

J. Dearness, London, Can.
Creonectria verrucosa (*Schw.*) *Seaver*
Dothiorella quercina (*C. & E.*) *Sacc.*
Entyloma polysporum (*Pk.*) *Farl.*
Mazzantia sepium *S. & P.*
Ophiobolus cesatianus (*Mont.*) *Sacc.*
Peronospora hydrophylli *Waite*

Peronospora parasitica *DeBy.*
Pestalozzia funerea *Desm.*
Phyllachora graminis (*Pers.*) *Fckl.*
Puccinia glaucis *Arth.*
Puccinia minutissima *Arth.*
Pyrenopeziza artemisiae (*Lasch*)
Septoria noctiflorae *E. & K.*
Urophlyctis pulposa (*Wallr.*)
Xylaria filiformis caulincola *Rehm*

F. Dobbin, Shushan
Bryum capillare *L.*
Collema pulposum (*Bernh.*) *Ach.*

C. E. Fairman, Lyndonville
Septoria polygonorum *Desm.*
Sphaeronema minutulum *D. Sacc.*
Ustilago hypodytes (*Schl.*) *Fr.*

W. G. Farlow, Cambridge, Mass.
Tolyposporella (?) nolinae *Clint.*
Uromyces spartinae *Farl.*
Ustilago muhlenbergiae *Clint.*

O. E. Fischer, Detroit, Mich.
Clitocybe piceina *Pk.*
Lepiota fischeri *Kauffm. ined.*

M. J. French, Utica
Pholiota comosa *Fr.*
Volvaria bombycina (*Pers.*) *Fr.*

G. S. Graves, Newport
Collection of 24 abnormal ferns, leaves and flowers.

C. Guillet, Westfield, Mass.
Solidago juncea ramosa *P. & B.*

J. F. v. Hafften, Winfield
Cedrus libani *Barr.*
Ginkgo biloba *L.*

C. C. Hanmer, East Hartford, Conn.
Lepiota farinosa *Pk.*
Marasmius peronatus *Fr.*

B. B. Higgins, Ithaca
Trimmatostroma salicis *Cd.*

A. P. Hitchcock, New Leb[illegible]non
Xylaria polymorpha (*Pers.*) *Grev.*

G. T. Howell, Rockville, Ind.
Pluteus alveolatus eccentricus *Pk.*
Tricholoma subsaponaceum *Pk.*

M. E. Jones, Salt Lake City, Utah
Puccinia aberrans *Pk.*
Thecopsora pyrolae (*Gmel.*) *Karst.*
Uredinopsis copelandii *Syd.*
Uromyces erythronii (*DC.*) *Pers.*

G. L. Kirk, Rutland, Vt.
Dichelyma pallescens *B. & S.*

R. Latham, Orient Point
Aecidium atriplicis *Shear*
Ascochyta rhei *E. & E.*
Belonidium aurelia (*Pers.*) *DeNot.*
Boletus ballouii *Pk.*

Camarosporium maclurae *Pk.*
Clitocybe pithyophila *Fr.*
Coccomyces juniperi *Karst.*
Collybia tuberosa *Bull.*
Coronophora angustata *Fckl.*
Coryneum pustulatum *Pk.*
Cytospora salicis (*Cd.*) *Rabenh.*
Dendrophoma tiliae *Pk.*
Durella corrugata (*C. & P.*) *Sacc.*
Geopyxis hesperidea *C. & P.*
Gloniopsis australis (*Duby*) *Sacc.*
Haplosporella ribis *Sacc.*
Hendersonia grossulariae *Oud.*
Hydnum subfuscum *Pk.*
Hygrophorus laetus (*Pers.*) *Fr.*
H. miniatus subluteus *Pk.*
H. sordidus *Pk.*
Hymenochaete rubiginosa (*Schrad.*)
Hypoxylon serpens (*Pers.*) *Fr.*
Marasmius epiphyllus *Fr.*
M. spongiosus *B. & C.*
Merulius ulmi *Pk.*
Mollisia melaleuca (*Fr.*) *Sacc.*
Monilia peckiana *S. & V.*
Mycena sanguinolenta *A. & S.*
Pestalozzia adusta *E. & E.*
P. funerea *Desm.*
P. longiseta *Speg.*
Phoma smilacis *Boy. & Jacq.*
Physcia hypoleuca (*Muhl.*) *Tuck.*
Poa compressa L.
Polyporus giganteus (*Pers.*) *Fr.*
Polysaccum pisocarpium *Fr.*
Propolis faginea (*Schrad.*) *Karst.*
Rhytisma vitis *Schw.*
Rosellinia mutans (*C. & P.*) *Sacc.*
Russula purpurina *Q. & S.*
Sagedia cestrensis *Tuck.*
Scleroderma geaster *Fr.*
Septoria dianthi *Desm.*
Solenia ochracea *Hoffm.*
Sphaeropsis persicae *E. & B.*
Steganosporium fenestratum (*E.& E.*)
Stereum acerinum nivosum *Rav.*
Streptothrix fusca *Cd.*
Tipularia discolor (*Pursh*) *Nutt.*
Trichostema dichotomum *L.*
Valsa linderae *Pk.*
Valsa rhoöphila *C. & E.*

W. B. Limberger, Randolph

Lysimachia punctata *L.*
Viola cardaminefolia *Greene*
Viola minuscula *Greene*

C. A. Mabie, Holley

Hydnum erinaceus *Bull.*
Lepiota naucinoides *Pk.*
Lepiota rhacodes *Vitt.*

G. E. Morris, Waltham, Mass.

Amanita crenulata *Pk.*
A. morrisii *Pk.*
Armillaria nardosmia *Ellis*
Boletus cyanescens *Bull.*
B. luteus *L.*
B. parasiticus *Bull.*
Cortinarius cinnabarinus *Fr.*
C. morrisii *Pk.*
C. vibratilis *Fr.*
Geaster morgani *Lloyd*
Merulius rubellus *Pk.*
Panaeolus subbalteatus *B. & Br.*
Paxillus microsporus *Pk.*
Pholiota duroides *Pk.*
Scleroderma tenerum *B. & C.*
S. verrucosum (*Bull.*)
Sparassis crispa (*Wulf.*) *Fr.*
Tricholoma saponaceum *Fr.*
Tricholoma sejunctum (*Sow.*) *Fr.*

F. T. Pember, Granville

Centaurea maculosa *Lam.*
Verbena stricta *Vent.*

L. H. Pennington, Syracuse

Coprinus domesticus (*Pers.*) *Fr.*
Hymenogaster anomalus *Pk.*

C. R. Pettis, Albany

Chilonectria cucurbitula (*Curr.*)
Phoma bacteriophila *Pk.*
Septoria mirabillissima *Pk.*

D. Reddick, Ithaca

Monilia peckiana *S. & V.*

W. H. Ropes, Salem, Mass.

Calvatia rubroflava *Cragin*
Lysurus borealis serotinus *Pk.*

F. L. Schrader, New York

Hygrophorus sordidus *Pk.*

F. J. Seaver, New York

Herpotrichia nigra *Hartig*

E. B. Sterling, Trenton, N. J.

Fomes igniarius (*L.*) *Fr.*
Hebeloma subcollariatum *B. & Br.*

F. C. Stewart, Geneva

Ascochyta imperfecta *Pk.*
Cercospora circumscissa *Sacc.*
C. medicaginis *E. & E.*
Collybia radicata (*Relh.*) *Fr.*
Diplodina medicaginis *Oud.*
Flammula sulphurea *Pk.*
Gloeosporium nervisequum (*Fckl.*)
G. valsoideum *Sacc.*
Hypholoma boughtoni *Pk.*
Lentinus spretus *Pk.*
Peronospora trifoliorum *DeBy.*
Pseudopeziza medicaginis (*Lib.*)

W. G. Stover, Stillwater, Okla.

Bolbitius fragilis *Fr.*
Marasmius bellipes *Morg.*
Marasmius delectans *Morg.*
M. opacus *B. & C.*

J. M. Van Hook, Bloomington, Ind.

Hypoxylon atropurpureum *Fr.*
H. effusum *Nits.*
H. petersii *B. & C.*
Hypoxylon rubiginosum (*Pers.*)
H. sassafras (*Schw.*)
H. turbinulatum (*Schw.*)
Nummularia microplaca *B. & C.*

W. G. Van Name, Albany

Roestelia aurantiaca *Pk.*

H. L. Wells, New Haven, Conn.

Boletus edulis clavipes *Pk.*

T. E. Wilcox, Washington, D. C.

Boletus affinis *Pk.*
Boletus subtomentosus *L.*
Sparassis herbstii *Pk.*

C. L. Williams, Glens Falls

Coniothecium chomatosporium *Cd.*

D. B. Young, Albany

Calyptospora goeppertiana *Kuehn*
Chaetomium streptothrix *Quel.*

SPECIES NOT BEFORE REPORTED

Acer carolinianum Walt.

Troupsburg, Steuben co. May. This species is readily distinguished from Acer rubrum L., the red maple, when in fruit. The wings are nearly parallel or convergent, but in the red maple they are divergent. They are also nearly or quite fully developed when the leaves are yet partly expanded. The leaves are usually only three lobed and are more hairy, specially beneath, than in the red maple. On account of the three lobed leaves it was named Acer rubrum var. tridens in Wood's Class Book of Botany It has generally been neglected by botanists but it certainly seems worthy of recognition. The station here reported is the only one in our State known to me and is north of its previously recorded range.

Aecidium atriplicis Shear

On living leaves of young plants of the halberd leaved orach, Atriplex patula hastata (L.) Gray. Orient Point, Suffolk co. May. R. Latham.

Anthyllis vulneraria L.

Introduced. Cobbs Hill reservoir. Rochester. September. Miss Florence Beckwith. Determined by P. A. Rydberg.

Armillaria pinetorum Gill.

Decaying wood. North Elba, Essex co. September. This species of Armillaria is easily distinguished by its small size, scaly cap and stem and very small spores. It differs from the European plant in growing on wood.

Artemisia frigida Willd.

Cobbs Hill reservoir. Rochester. August. Miss F. Beckwith. Introduced from the West but well established.

Artemisia gnaphalodes Nutt.

Cobbs Hill reservoir. Rochester. August. Miss F. Beckwith. Introduced from the West. This and the preceding one were determined by P. A. Rydberg.

Ascochyta imperfecta n. sp.

Spots variable, 4–12 mm in diameter, amphigenous, orbicular, semicircular or subtriangular, the larger ones usually terminal or marginal, pale brown or smoky brown, not sharply defined;

perithecia amphigenous, few, depressed, .3–.6 mm broad, brown or blackish brown; spores variable, continuous or pseudouniseptate, oblong or subcylindric, obtuse, hyaline, 6–15 x 2.5–4 μ.

Living or languishing leaves of alfalfa, Medicago sativa L. Geneva. May and June. F. C. Stewart.

It may be separated from Ascochyta medicaginis Bres. by its habitat and smaller perithecia and spores.

Ascochyta rhei E. & E.

Living leaves of pie plant, Rheum rhaponticum L. Orient Point. R. Latham. This was originally described as Phyllosticta rhei E. & E.

Boletus albidipes n. sp.

For description of this species see article on Edible Fungi in another chapter of this report.

Boletus ballouii n. sp.

Plate VIII, figures 1–5

Pileus fleshy, firm, often irregular, convex becoming nearly plane or slightly depressed in the center, dry, unpolished or minutely tomentose, occasionally rimosely squamose, at first bright orange or orange tinged with brown, becoming wood brown or subcinnamon with age or in drying, flesh white tinged with yellow beneath the cuticle, taste mild or sometimes slightly disagreeable; tubes at first white or whitish becoming smoky brown where cut or bruised and brown or brownish in drying, usually slightly depressed around the stem and adnexed or subdecurrent; stem variable, solid, mealy or minutely scurfy, striate or subreticulate at the top, single or cespitose, white or pallid above, yellow or orange below, similar to the pileus in color when dry, its flesh when cut while fresh assuming a brownish tint, mycelium white, radiating at the base; spores pale yellow inclining to orange, 8–10 x 4–5 μ, cystidia rare, fusiform, granular within.

Pileus 5–12 cm broad; stem 2.5–12 cm long, 7–15 mm thick.

Orient Point. October. R. Latham. Specimens have also been received with copious notes from W. H. Ballou for whom the species is named. They were collected in groves at or near Deal Beach, N. J. It is said to be common in Monmouth co., N. J. This is a beautiful species apparently related to Boletus subsanguineus Pk. from which it differs in its dry pileus with its

orange color changing to brown, in its whitish tubes and in its stem approaching the pileus in color.

Camarosporium maclurae n. sp.

Perithecia gregarious, about .3 mm broad, nestling in the bark, erumpent, conic or subglobose, scarcely papillate, black; spores at first simple and hyaline, then colored and 3–5-septate and muriform, sometimes slightly curved, 15–20 x 8–10 μ.

Dead branches of osage orange, Maclura pomifera (Raf.) Schneid. Orient Point. April. R. Latham.

The apertures in the epidermis through which the fungus breaks are either orbicular or subelliptic.

Centaurea maculosa Lam.

Granville, Washington co. September. F. T. Pember. An introduced species.

Cercospora medicaginis E. & E.

Living leaves of alfalfa, Medicago sativa L. Geneva. June. F. C. Stewart.

Cercosporella terminalis n. sp.

Spots narrowly oblong, 1–3 cm long, 3–5 mm broad, often confluent, specially at the apical end of the leaf which is commonly entirely discolored, brown or blackish brown, often sterile; tufts mostly effused, forming linear flocculent white patches; spores variable, curved or flexuous, subcylindric or gradually tapering toward the apex, continuous or 1–3-septate, often nucleate, 50–150 x 3–5 μ, supported on short simple or obscure hyphae.

Leaves of Indian poke, Veratrum viride Ait. Edwards, St Lawrence co. May.

This species is closely related to Cercosporella veratri Pk. from which it is easily distinguished by its earlier appearance and by the different character of the spots. Their habit of becoming confluent and discoloring the whole apex of the leaf has suggested the specific name. Notwithstanding the obscure character of the hyphae, a careful search even in young and slightly discolored spots failed to detect any acervuli.

Clavaria subtilis Pers.

Among fallen leaves of spruce trees. North Elba. September. In some of the specimens the tips of the ultimate branchlets have retained their pure white color.

Clitocybe fumosa brevipes n. var.

This variety differs from the typical form in its constantly short stem which is 1.2–2 cm long. Its thickness is nearly equal to its length. It is so short that the pileus appears to rest on the ground.

Canandaigua. October. Miss E. C. Webster. Near New York City. W. H. Ballou.

Clitocybe hirneola Fr.

North Elba. September.

Clitocybe sinopicoides n. sp.

Low wet places. North Elba. June. For the description of this species see chapter on New York species of Clitocybe.

Clitocybe splendens (Pers.) Fr.

Mossy ground under balsam fir trees. North Elba. June. This species is allied to Clitocybe gilva (Pers.) Fr. from which it may be separated by its whiter flesh, its thinner pileus and its less crowded lamellae. The spores in both are subglobose and 4–5 μ broad.

Clitocybe sudorifica n. sp.

Gregarious. Grassy ground. Saratoga Springs, F. G. Howland. Albany, S. H. Burnham. Canandaigua, Miss E. C. Webster. September to November. For description see chapter on New York species of Clitocybe.

Clitocybe tuba Fr.

Woods. North River. September.

Clitocybe tumulosa Kalchb.

Woods. North Elba. September.

Coniothecium chomatosporium Cd.

Branches of apple tree. Glens Falls. April. C. L. Williams.

Coprinus domesticus (Pers.) Fr.

Syracuse. June. L. H. Pennington. A very rare species.

Coronophora angustata Fckl.

Dead trunks of bayberry, Myrica carolinensis Mill. Orient Point. April. R. Latham.

Cortinarius albidipes n. sp.

The description of this species will be found in the chapter on Edible Fungi in this report.

Cortinarius phyllophilus n. sp.

Pileus fleshy, thick, compact, convex or nearly plane, viscid, somewhat shining and slightly innately fibrillose when dry, pale tawny ochraceous, flesh white, taste mild; lamellae thin, close, eroded on the edge, yellow becoming brownish cinnamon; stem short, stout, firm, abruptly bulbous, silky fibrillose, whitish with ferruginous stains at the base; spores somewhat pointed at the ends, 10–12 x 5–6 μ.

Pileus 7–12 cm broad; stem 3–5 cm long, 1–1.5 cm thick.

Among fallen leaves in woods. Humphreys gorge, Lewis co. September.

The species belongs to section Phlegmacium, group Scauri. The color of the spore print is dark cinnamon. Young lamellae yellow.

Cortinarius purpurascens Fr.

Canandaigua. September. Miss E. C. Webster.

Coryneum disciforme K. & S.

Dead branches of basswood, Tilia americana L. Vaughns, Washington co. June. S. H. Burnham.

Cytospora rhoina Fr.

Dead branches of smooth sumac, Rhus glabra L. Rensselaer. February. S. H. Burnham.

Cytospora salicis (Cd.) Rabenh.

Dead branches of willows. Orient Point. May. R. Latham.

Dasyscypha sulphuricolor n. sp.

Cups sulfur color, gregarious or subcespitose, subsessile, 1–3 mm broad, minutely villose, hymenium plane or convex, margined by the incurved edge of the cup; asci subcylindrical, 70–80 x 3–4 μ; spores oblong or subfusiform, 10–12 x 2–3 μ, paraphyses filiform.

Decaying wood of black ash, Fraxinus nigra Marsh. Remsen, Oneida co. August. The species is apparently related to Dasyscypha pulverulenta (Lib.) Sacc. but it differs from it in its larger size, longer asci and spores and in its habitat.

Deutzia scabra Thunb.

The rough leaved deutzia is plentiful along the stream at Copake Iron Works, Columbia co. July. S. H. Burnham. It has evidently escaped from cultivation but is apparently well established. Occasionally double flowered specimens are seen, which indicates that such plants grew from branchlets of Deutzia scabra var. plena Maxim. which had taken root and developed into shrubs.

Diplodia spiraeina Sacc.

Dead branches of nine bark, Physocarpus opulifolius (L.) Maxim. Near Rensselaer lake, Albany co. May. S. H. Burnham.

Diplodina medicaginis Oud.

Dead stems of alfalfa, Medicago sativa L. Geneva. April. F. C. Stewart.

Flammula sulphurea n. sp.

Plate VII, figures 7–11

Pileus fleshy, subconic or convex becoming broadly convex, glabrous, viscid, hygrophanous, watery yellow when moist, sulfur yellow after the escape of the moisture, sometimes with whitish silky fibrillose scales on the margin, flesh white when dry, odor and taste disagreeable; lamellae thin, close, arcuate, adnate, crenulate on the margin, whitish becoming dark ferruginous; stem equal, flexuous, fibrillose or squamulose below, stuffed or hollow, pale yellow and naked at the top, ferruginous toward the base; spores dark ferruginous, 8–11 x 5–6 μ.

Pileus 2–6 cm broad; stem 3–6 cm long, 4–8 mm thick.

Cespitose or densely gregarious. Grassy ground under apple trees or in orchards. October. Menands, Albany co. Canandaigua. Miss E. C. Webster. Geneva. F. C. Stewart. Pittsford, Monroe co. F. S. Boughton.

This species is related to Flammula spumosa Fr. with which it has probably been confused but from which it is easily distinguished by its place of growth, its more cespitose mode of growth, the uniform pale yellow color, fibrillose margin of the pileus, white flesh and larger spores. Its color is suggestive of F. alnicola Fr., but it is readily separated from that by its place of growth, white flesh and viscid hygrophanous pileus. It is worthy of remark that this species has appeared for the first time this season in four distinct localities and in each one under or near apple trees.

Fusarium pirinum (Fr.) Sacc.

On decaying pears. Menands. August.

Ganoderma sessile Murr.

Dead wood of oak and elm. Poebles island, Waterford, Saratoga co. September. S. H. Burnham. New York. W. H. Ballou. It

is colored like Ganoderma tsugae Murr. but is a smaller species with the pileus sessile and dimidiate.

Gloeosporium valsoideum Sacc.

Small twigs of sycamore, Platanus occidentalis L. Geneva. F. C. Stewart. It is easily distinguished from Gloeosporium nervisequum (Fckl.) Sacc. by its habitat and larger and more conspicuous pustules.

Gutierrezia sarothra (Pursh) B. & R.

Cobbs Hill reservoir. Rochester. August. Miss F. Beckwith. Introduced but apparently well established.

Gymnolomia multiflora (Nutt.) B. & H.

Cobbs Hill reservoir. Rochester. August. Miss F. Beckwith. Introduced but apparently well established. This and the preceding one were determined by P. A. Rydberg.

Haplosporella ribis Sacc.

Dead stems of some species of cultivated Ribes. Orient Point. May. R. Latham.

Hebeloma sinapizans Fr.

Canandaigua. September. Miss E. C. Webster.

Helvella capucinoides n. sp.

Pileus thin, submembranaceous, saddle-shaped, usually with one lobe deflexed, the other erect, the naked free margins of both curved inward, the lower enfolding the top of the stem, the hymenium smoky ochraceous, becoming brown or ochraceous brown with age or in drying, the lower or inner surface of the pileus white, rugulose; stem slender, firm, equal, stuffed or hollow, the surface wavy or uneven, minutely and pubescently pruinose, snowy white; asci cylindric, 240–280 x 18–20 μ; spores oblong ellipsoid, uniseriate, uninucleate, hyaline, 20–28 x 12–16 μ, paraphyses filiform, clavate at the tips.

Pileus .5–2.5 cm broad; stem 2.5–7 cm long, 2–4 mm thick.

Gregarious. In groves of arbor vitae trees, Thuja occidentalis L. North River. September.

This species agrees in some of its characters with the description of Helvella capucina Quel. but it differs in the shape and color of the pileus, in its naked margin and its even surface. The large nucleus of the spores in our plant is hyaline, not greenish as in the European.

Hendersonia grossulariae Oud.

Dead or dying stems of cultivated gooseberry, Ribes grossularia L. Orient Point. May. R. Latham.

Hydnellum peckii Banker ined.

Growing on the ground. North Elba. September. The plants are single or cespitose and have the pilei sometimes confluent. The pileus is whitish becoming brownish or subviolaceous with age.

Hygrophorus recurvatus n. sp.

Pileus fleshy in the center, thin toward the margin, convex becoming plane or concave by the margin curving upward, often lacerated on the margin, grayish brown and obscurely striatulate on the margin when moist, subalutaceous and even when dry, glabrous, the center often more highly colored than the margin, flesh white; lamellae subventricose, distant, venosely connected, decurrent, whitish; stem fragile, equal, stuffed or hollow, fibrous, easily splitting, subpruinose, white or whitish; spores broadly ellipsoid or subglobose, 6–8 x 4–6 μ or 6–7 μ in diameter.

Pileus 1.2–2.4 cm broad; stem 2–4 cm long, 2–4 mm thick.

Growing on lawns. Canandaigua. October. Miss E. C. Webster.

The plants sometimes grow in arcs of circles. The relationship appears to be with Hygrophorus colemannianus Blox. from which it may be distinguished by its smaller size, paler color, more fragile character and its upcurved margin of the pileus in mature plants.

Hygrophorus sordidus Pk.

Among fallen leaves along the banks of Bronx river, New York. October. F. L. Schrader. Orient Point. R. Latham.

Leptosphaeria distributa (C. & E.) Sacc.

Dead stems of some species of Asclepias. Edwards. May These specimens differ from the typical form in not blackening the cuticle which at first covers the perithecia.

Marasmius epiphyllus Fr.

Fallen leaves. Orient Point. August. R. Latham. Port Jefferson, Suffolk co. Closely allied to Marasmius insititius Fr. from which the more velvety stem will separate it.

Melanconis alni Tul.

Dead branches of hoary alder, Alnus incana (L.) Moench. Rossie, St Lawrence co. May. The specimens are young.

Mycena atroumbonata n. sp.

Pileus submembranaceous, convex becoming broadly convex or nearly plane, umbonate, striate plicate from the margin half way to the umbo, glabrous, dark watery brown and shining when moist, grayish brown with a black umbo when dry; lamellae thin, moderately close, widely sinuate at the inner extremity, decurrent with a tooth, white when young, whitish or livid white when mature; stem slender, rather long, glabrous, hollow, radicating, colored like the pileus, with a white villosity at the base; spores oblong or ellipsoid, granular within, often 2-nucleate, 6–9 x 5–6 μ.

Pileus 1.2–3.2 cm broad; stem 5–8 cm long, 1–2 mm thick.

Gregarious. Mossy prostrate decaying trunks of hemlock, Tsuga canadensis (L.) Carr. North River. September.

This species is closely related to Mycena galericulata Scop. with which it probably has hitherto been confused. It differs in its gregarious mode of growth, its habitat, its black umbo, its widely plicate striate margin of the pileus, its pure white young lamellae and its more expanded mature pileus.

Mycena metata Fr.

Ground. Canandaigua. September. Miss E. C. Webster.

Naucoria arenaria n. sp.

Pileus thin, convex or nearly plane, glabrous, pale yellow or reddish yellow with paler margin; lamellae broad, distant, unequal, sinuate, brownish ferruginous; stem slender, rigid, glabrous, stuffed with a white pith, colored like the pileus, pseudobulbous; spores brownish ferruginous 15–20 x 10–12 μ.

Pileus .75–2 cm broad; stem 2–3 cm long, 1–2 mm thick.

Sandy soil. Karner, Albany co. August.

A small species closely related to Naucoria platysperma Pk. but much smaller with more distant lamellae and a more rigid stem enlarged at the base by a globe of sand bound together by the mycelium and firmly attached to the stem.

Oenothera muricata L.

Canandaigua. August. Mrs E. P. Gardner, who also sends specimens of Oenothera muricata canescens (T. & G.) Robins.

Omphalia offuciata Fr.

Under or near pine trees. Luzerne, Warren co. June. In our specimens the spores are broadly ellipsoid or nearly globose,

6–8 x 5–6 μ or 5–6 μ in diameter. I have seen no description of the European plant that gives the spore dimensions.

Ophiotheca vermicularis (Schw.) Macbr.

Dead stems of herbs. Edwards. May. Determined by T. H. Macbride.

Peniophora tenuissima n. sp.

Widely effused, very thin, indeterminate, adnate, not at all or but slightly rimose when dry, whitish, subpruinose; spores ellipsoid, 8 x 4 μ; cystidia subcylindric or elongated conic, obtuse, 50–80 x 15–20 μ.

Bark of yellow birch, Betula lutea Mx. North Elba. June.

Periconia pycnospora Fres.

Dead stem of paeony, Paeonia officinalis L. Menands. April. Rare.

Peronospora trifoliorum DeBy.

Living leaves of alfalfa, Medicago sativa L. Geneva, Potsdam, Fayetteville, Canandaigua and Earlville. June. F. C. Stewart. Oospores were found in October.

Pestalozzia adusta E. & E.

Living leaves of wild black cherry, Prunus serotina Ehrh. Orient Point. July. R. Latham.

Pestalozzia funerea Desm.

Twigs of white cedar, Thuja occidentalis L. Orient Point. May. R. Latham.

Pestalozzia longiseta Speg.

Living leaves of cultivated raspberry. Orient Point. August. R. Latham.

Phacidium lignicola n. sp.

Perithecia superficial or nearly so, about 1 mm broad, orbicular or broadly ellipsoid, prominent, rugose, black, laciniately opening, the margin with 3–5 triangular teeth; hymenium blackish or greenish black; asci clavate, 60–80 x 12 μ broad in the widest part; spores crowded or subdistichous, continuous, straight or slightly curved, oblong or sometimes slightly narrowed toward one end, hyaline. 12–15 x 3.5–4 μ.

Dry hard decorticated wood of American aspen, Populus tremuloides Mx. Thompsons Lake, Albany co. May.

Pholiota rigidipes n. sp.

Pileus fleshy, rather thin, broadly convex, sometimes slightly and broadly umbonate, obscurely squamulose with appressed hairy brownish scales more conspicuous in the center, pale yellow or buff, flesh white, tinged with yellow next the gills, taste mild; lamellae thin, rather broad, close, adnexed, brownish ferruginous when mature; stem equal, slender, stuffed or hollow, more or less flexuous, rigid, floccose squamulose below the slight sometimes evanescent annulus, white and pruinose at the top, pallid below the annulus; spores ellipsoid, 8–10 x 5–6 μ.

Pileus 5–8 cm broad; stem 5–7 cm long, 4–6 mm thick.

Among fallen leaves in woods. Constableville, Lewis co. September.

This species is related to Pholiota terrigena Fr. from which I have separated it because of its more slender habit, white flesh, adnexed lamellae and more slender rigid stem. The margin of the pileus in the dried specimen is obscurely striate.

Phoma amorphae Sacc.

Dead stems of false indigo, Amorpha fruticosa L. Near Kenwood, Albany co. May. S. H. Burnham.

Phoma bacteriophila n. sp.

Perithecia minute, .2–.3 mm broad, at first covered by the epidermis, then erumpent, scattered or densely gregarious, sometimes crowded and covering the whole branchlet, black; spores obovate or ellipsoid, hyaline, 6–8 x 4–5 μ.

Canker spots on young stems of white pine, Pinus strobus L. and on dead branchlets which it completely covers. White Pine plantation, Saranac Lake, Franklin co. April. C. R. Pettis.

The young trees are killed by a bacterial disease and the dead spots of the trunk and dead branchlets are attacked by this and other fungi.

Phoma leprosa n. sp.

Perithecia .3–.5 mm broad, depressed or subglobose, perforated, covered with a whitish incrustation; spores straight, cylindric, hyaline, 10–15 x 3–4 μ.

Old fruit of the punctate fruited thorn tree, Crataegus punctata Jacq. Rossie. May.

The sporophores are short or obsolete. The fungus is conspicuous by reason of the white crustlike scales that cover the perithecia This character is suggestive of the specific name.

Phoma smilacis B. & J.

Dead stems of some species of Smilax. Orient Point. April. R. Latham.

Physcia granulifera (Ach.) Tuck.

Lyndonville, Orleans co. C. E. Fairman. On stems of button bush, Cephalanthus occidentalis L. Karner. January. S. H. Burnham.

Polyporus melanopus Fr.

Woods. Vaughns, Washington co. October. S. H. Burnham. Determined by C. G. Lloyd. A rare species both in this country and in Europe. It bears some resemblance to Polyporus radicatus Schw. from which it is separated by its cespitose mode of growth and its smaller spores. It is more closely allied to P. varius Fr.

Polysaccum pisocarpium Fr.

Sandy soil in cedar woods. Orient Point. October. R. Latham.

Poria pulchella Schw.

Bark of black willow, Salix nigra Marsh. Loudonville, Albany co. March. S. H. Burnham.

Psilocybe fuscofolia n. sp.

Solitary, gregarious or cespitose. Vicinity of New York. October. W. H. Ballou. For description of this species see chapter on New York species of Psilocybe.

Psilocybe polycephala (Paul.)

Ground in woods. Constableville. September. Description given in chapter on Edible Fungi.

Ramularia karstenii Sacc.

Leaves of Epilobium adenocaulon Haussk. North Elba. June. It most frequently occupies the apical part of the leaves and discolors and kills them. The basal half of the leaf is usually reddish.

Rubus glandicaulis Blanch.

Roadsides and pastures. North Elba. June.

Sagedia cestrensis Tuck.

Bark of basswood, Tilia americana L. Orient Point. March. R. Latham.

Septoria aquilegiae Penz. & Sacc.

Living leaves of wild columbine, Aquilegia canadensis L. Rossie. May. Septoria aquilegiae E. & E. appears to be the same species.

Septoria dianthi Desm.

Living or languishing leaves of sweet william, Dianthus barbatus L. Orient Point. June. R. Latham. In these specimens the spots are surrounded by a purple border.

Septoria malvicola E. & M.

Leaves of the common or round leaved mallow, Malva rotundifolia L. Rossie. May.

Septoria mirabilissima n. sp.

Perithecia scattered, very minute, .1–.2 mm broad, superficial, black; spores filiform, flexuous or curved, continuous, hyaline. 40–150 x 1.5–2 μ, supported on slender sporophores, 20 x 1 μ.

Slightly discolored bark of white pine, Pinus strobus L. Four year old seedlings. White pine plantation, Saranac Lake. April. C. R. Pettis.

A remarkable species because of its peculiar habitat and its minute size. It is scarcely visible to the naked eye. The spores are unusually long and when moist the perithecia are easily scraped from the bark. The bark tissues had assumed a dark rusty red color, probably from some bacterial invasion and the trees were in a dying condition.

Sphaeronema minutulum D. Sacc.

Dead stems of showy sedum, Sedum spectabile Bor. Lyndonville. October. C. E. Fairman.

Sphaeropsis amorphae E. & B.

Dead stems of false indigo, Amorpha fruticosa L. Menands. March. S. H. Burnham.

Sphaeropsis maclurae Cke.

Dead branches of osage orange, Maclura pomifera (Raf.) Schneid. Kenwood. May. S. H. Burnham. The perithecia are densely gregarious and cover the branches on all sides. Occasion-

ally two are crowded together thereby indicating an approach to the genus Haplosporella.

Spongipellis occidentalis Murr.

Prostrate trunk of American elm, Ulmus americana L. Vaughns. October. S. H. Burnham.

Stagonospora carpathica Baeuml.

Living leaves of alfalfa, Medicago sativa L. Geneva. June. F. C. Stewart. The typical form of the species occurs on leaves of sweet clover, Melilotus alba Desv. but the form on alfalfa leaves does not differ essentially from it.

Steccherinum peckii Banker ined.

Dead wood of sugar maple, Acer saccharum Marsh. Griffin Corners, Delaware co. September. The species is related to Steccherinum ochraceum (Pers.) S. F. Gray from which it differs in having a distinct stemlike base and in being glabrous and more distinctly zonate. The pilei are often laterally confluent as in Stereum fasciatum Schw.

Steganosporium fenestratum (E. & E.) Sacc.

Twigs and branches of sweet pepperbush, Clethra alnifolia L. Orient Point. May. R. Latham.

Stigmina populi (E. & E.) Pk.

Living leaves of American aspen, Populus tremuloides Mx. North Elba. June. This is a parasitic fungus which causes dead spots on the leaves. These spots increase in size and often become confluent and kill the leaves. The spores develop on both sides of the leaf and form dark olive green patches on the dead spots. The species was placed in the genus Clasterosporium by Ellis and Everhart, but its phyllogenous and biophilous characters evidently indicate a closer relationship to the genus Stigmina.

Teichospora trimorpha n. sp. Atk.

Perithecia scattered or gregarious, rounded, orbicular or oblong, rarely two or three conjoined, plane or shortly papillate, black, sunk in the bark; asci dimorphic, 30–125 x 12–15 μ, cylindric or tapering very gradually into a short pedicel, some collapsing, 4–6- or 8-spored; spores uniseriate, 20–30 x 7–10 μ, constricted in the middle 5–8-septate, blackish brown, frequently inequilateral, paraphyses filiform, numerous.

Bark of dead branches of poplar. Fall creek above the dam. Near Ithaca. March 1894. G. F. Atkinson.

This species differs from Teichospora disseminata B. & C. in its much larger perithecia.

Thyridium pallidum E. & E.

Dead branches of staghorn sumac, Rhus typhina L. Vaughns. June. S. H. Burnham.

Tricholoma boreale Fr.

Lawns near Dudley observatory grounds under or near Austrian pine trees. Albany. November. S. H. Burnham.

Tricholoma planiceps n. sp.

Pileus fleshy but very thin, broadly convex or plane, glabrous, grayish brown or yellowish brown with the thin acute margin sometimes whitened by a very thin flocculent tomentum, flesh white; lamellae thin, narrow, close, slightly sinuate, white or whitish; stem slender, straight, stuffed or hollow, colored like but a little paler than the pileus; spores broadly ellipsoid, 7–8 x 5–6 μ.

Pileus 2–5 cm broad; stem 4–6 cm long, 4–6 mm thick.

In arbor vitae groves. North River. September.

Allied to Tricholoma melaleucum (Pers.) Fr. from which it differs in its very regular plane orbicular pileus, its more crowded narrow lamellae, its strict stem and broader spores. Its habitat is peculiar having been found only under white cedar trees, Thuja occidentalis L., and in but one locality. In this station it has been found two years in succession.

Tricholoma subsaponaceum n. sp.

Pileus fleshy, compact, flexible, convex or nearly plane, glabrous, whitish creamy white or pallid on the margin, smoky brown or ahutaceous in the center, sometimes marked by a row of pallid or watery spots near the margin, assuming yellow or saffron hues where cut or bruised, flesh white, changing color like the pileus where cut or wounded, odor pleasant like anise, taste farinaceous; lamellae broad, close, adnexed or nearly free, whitish; stem variable, equal or enlarged at the top or at the base, sometimes compressed, often abruptly narrowed at the base and radicating, silky fibrillose, solid becoming hollow with age, whitish, changing color like the pileus where cut or bruised; spores broadly ellipsoid or subglobose, 5-6 x 4–5 μ.

Pileus 6–14 cm broad; stem 4–5 cm long, 1.5–3 cm thick.

Among fallen leaves in woods. October. Brooklyn. F. H. Ames. Also near Rockville, Indiana. G. T. Howell.

The Indiana specimens are taken as the type. The species is related to Tricholoma saponaceum Fr. but differs from it in the color assumed by wounded places, in its odor and taste and in its spores.

Tricholoma subsejunctum n. sp.

The description of this species will be found in the chapter on Edible Fungi in this report.

Trimmatostroma salicis Cd.

Dead branches of willows. Ithaca. November. B. B. Higgins.

Uromyces spartinae Farl.

Leaves of smooth marsh grass, Spartina glabra alterniflora (Loisel.) Merr. Shelter Island, Suffolk co. October. W. G. Farlow.

Ustilago hypodytes (Schl.) Fr.

On dead stems of quack grass, Agropyron repens (L.) Bv. Lyndonville. June. C. E. Fairman.

Verbena stricta Vent.

Pastures. Granville. August. F. T. Pember. Introduced from the western part of the country.

Vermicularia hysteriiformis n. sp.

Perithecia elliptic or oblong, .3–.6 mm long, at first covered by the epidermis, then erumpent, setose, black, the setae continuous, erect or divergent, 50–120 x 4–5 μ, black, tapering upward, pale at the apex; spores oblong or subfusiform, straight or slightly curved, acute at the ends, continuous, hyaline, 20–25 x 3–4 μ.

Dead stems of blue cohosh, Caulophyllum thalictroides (L.) Mx. Troupsburg. May.

Volutella buxi (Cd.) Berk.

Living and languishing stems and leaves of box, Buxus sempervirens L. East Hampton, Suffolk co. October. Mrs J. H. Poor.

REMARKS AND OBSERVATIONS

Agaricus arvensis Schaeff.

This fine large mushroom was found by F. H. Ames growing in the arc of a circle about 15 feet in diameter. Long Island. September. Several species occasionally grow in this manner. The fairy ring mushroom frequently does.

Agaricus subrufescens Pk.

This rare species in our State was found by Mrs R. C. Burnham near Vaughns in August. Its pileus was more distinctly squamose than usual. The scales were larger and more conspicuous and the young lamellae were whitish and those of the mature plants were brown. No intervening pink colored lamellae were seen.

Andropogon furcatus Muhl.

A glaucous form of this grass occurs in sandy soil near Karner. August.

Calvatia gigantea (Batsch)

The giant puff ball is the largest species known. It is not unusual for it to attain a diameter of 12–14 inches. It is also one of the very best of our esculent species. It has long been known to be edible so long as its flesh is pure white and it has never been known to prove, so far as I am informed, injurious to anyone eating it in reasonable quantity and at reasonable times. The unfortunate thing about it is that it is not common nor of long continuance. It occurs mostly in the month of September only and in limited stations widely separated from each other and generally in limited number in any station. On the farm of one of our correspondents, Mr A. P. Hitchcock, New Lebanon, is a station in which a few specimens have appeared annually for several years.

On the first day of September three or four young plants had made their appearance. These were in close proximity to each other. On September 6th two more had appeared. Two were selected for observation and numbered respectively 1 and 2. The following is the record of the development of these two as made by Mr Hitchcock.

Sept.		No. 1			No. 2	
1	circum.	10 in.	estimated	circum.	6 in.	estimated
6	"	32.75	measured	"	16	measured
8	"	38	"	"	34	"
10	"	42.5	"	"	43.5	"
11	"	43.75	"	"	45.75	"
12	"	42	"	"	46	"
15	decay commenced			"	46	"

On the 15th, the observations ceased.

It will be seen that No. 1 continued to increase in size for ten days or to the 11th when its circumference was 43.75 inches. The total increments amount to 33.75 inches. This gives an average daily increase of 3.37 inches. Number 2 continued to increase eleven days when its circumference was 46 inches and the total increments amount to 40 inches. This gives an average daily increase of 3.63 inches. It remained stationary three days and then began to decay. Number 1 being larger at the commencement of the observations, it is fair to conclude that it started about one day before No. 2. This gives them both at least eleven days in which to make their full development. We may therefore conclude that the average time of the development of these puff balls is about eleven days and that their average daily rate of increase in circumference is about 3.5 inches or a little more than one inch in diameter. The average time of growth appears to be eleven or twelve days or possibly twelve to fourteen days according to the length of time these two had been above ground before they were first seen.

Centaurea nigra radiata DC.

Homer, Cortland co. August. C. M. Crouse and Mrs L. L. Goodrich. An introduced plant.

Cichorium intybus L.

A white flowered form sometimes occurs. Menands. August.

Convolvulus arvensis L.

Washington park, Albany. July. S. H. Burnham. A form growing on lawns with leaves oblong and only 1–2 lines broad, the lobes at the base very narrow and divergent.

Corallorrhiza trifida Chatelain .

North Elba. June. This delicate little coral root is becoming very rare in our State. Its early blooming time, May and June, at once distinguishes it from our other small species.

Cryptogramma stelleri (Gmel.) Prantl

Head of Plattekill cove, Ulster co. September. Mrs Charles Beach. This little fern was found growing in the crevices of sandstone rocks. It usually grows on limestone rocks and this is the first instance known to us in which it has been found growing on sandstone in our State. It occurs on sandstone cliffs in a few places in the middle western states.

Drosera rotundifolia L.

This common sundew and its variety comosa Fernald occur along the sandy shores of White lake, Oneida co. Specimens are sometimes found with the scape forked near the top, each branch bearing flowers and fruit. One thrifty plant had two forked scapes and two simple ones. There were six racemes borne on four scapes, which was a saving of two scapes. In the variety a similar economy is practised by shortening the rhacis of the raceme and crowding the flowers and fruit together.

Euphorbia corollata L.

Sand hills near Albany rural cemetery. September. S. H. Burnham. This is a rare species in our State. In the locality here given it is probably an introduction from the western states.

Galera reticulata Pk.

This rare species of mushroom was collected near Pittsford in October by F. S. Boughton. This is the second locality now known for it in our State.

Grindelia squarrosa (Pursh) Dunal

Overrunning a pasture at Montgomery, Orange co. September. J. A. Crabtree. In New York State Museum Bulletin 150, page 31, this plant was reported from Granville where it is recorded as growing in dry pastures on hillsides and in some places constituting nearly all the vegetation. Its abundance and aggressiveness in both these instances indicate that it is likely to become a noxious weed in our pastures. It would therefore be well to destroy it promptly in these places and in every locality where it may appear. A little labor of this kind promptly done may save much labor in the future and much loss of pasturage.

Grindelia squarrosa nuda (Wood) Gray

Cobbs Hill reservoir. Rochester. November. Miss F. Beckwith. This variety differs from the typical form in its flower heads having no ray flowers.

Habenaria ciliaris (L.) R. Br.

Fruiting specimens of this pretty orchidaceous plant were collected in August in a low but not wet piece of ground near Karner. Scarcely more than a dozen plants of it have been seen here any season since its discovery several years ago. The past season there were eleven. The vicinity has been deprived of most of its larger trees in comparatively recent years, yet the yellow fringed orchis is perpetuating itself well in spite of its changed environment. It probably could be cultivated if given a soil similar to that which it now occupies.

Hypholoma rigidipes Pk.

This mushroom was discovered two years ago at North River. Mr F. S. Boughton has added a second station for it by finding it near Pittsford in October.

Lachnea hemisphaerica pusilla n. var.

Cups small, 1.5–4 mm broad; spores uninucleate. In other respects like the typical form. Exsiccated water holes. Remsen. August.

Lactarius minusculus Burl.

Damp ground under or near pine trees. North River. September. In these specimens the milk was sparse or entirely absent, the pileus was viscid and the taste acrid. The color of the pileus is orange brown, sometimes darker in the center than on the margin.

Lepiota rhacodes Vitt.

This lepiota is very rarely seen in our State. Fine specimens were found near Holley, Orleans co. in October by C. A. Mabie.

Lobelia cardinalis L.

A white flowered form of the showy cardinal flower was found at Gull bay, Lake George in August by Mrs H. H. Murdock.

Lonicera tatarica L.

Pastures. Hornell. May. Two forms occur. One has young flowers pink, the other white, but the flowers of both become yellowish with age or in drying.

Lonicera xylosteum L.

Well established in the woods south of Kenwood. May. S. H. Burnham.

Lysimachia punctata L.

Roadsides near Randolph, Cattaraugus co. August. W. B. Limberger. Plants with whorled flowers only.

Lysimachia thyrsiflora L.

A peculiar form of this plant was collected near Canandaigua in July by Miss E. C. Webster. It has a terminal raceme which gives the plant the general appearance of Lysimachia terrestris (L.) BSP. The flowers are more closely placed, the pedicels are shorter and the petals and sepals are marked by dots instead of lines or dashes as in that species. There are also two short opposite thyrselike racemes just below the terminal one, and two longer and looser clusters among the leaves beneath. These are distant from each other with two leafy branches between them. The single contributed specimen suggests the possibility of its being a hybrid between L. thyrsiflora L. and L. terrestris (L.) BSP.

Mentha gentilis L.

Introduced and occurring specially in waste places in gardens and in dooryards. Kingsbury, Washington co. August. S. H. Burnham. It is recognizable at a glance by its variegated leaves, these having whitish or pale yellowish stripes along the principal veins.

Merulius ulmi Pk.

The type specimens of this species were found on dead branches of elm. It has been found at Orient Point growing on bayberry, Myrica carolinensis Mill. The former specimens are sterile and have the hymenium brighter colored than the latter. The spores in these are globose and 4–5 μ in diameter.

Osmunda cinnamomea bipinnatifida Clute

Woods south of Kenwood. May. S. H. Burnham. It differs from the common form in having some of the lower pinnae pinnatifid.

Plowrightia morbosa (Schw.) Sacc.

Specimens illustrative of the different effects of the black knot on the host plant were collected on chokecherry, Prunus vir-

giniana L., near Meadowdale, Albany co., in July. Some of the branches were completely surrounded by the black knot, others were partly surrounded. Those surrounded showed dead leaves only above the knot, those partly surrounded showed green leaves only above the knot.

Polygonum hydropiper L.

A slender form with elongated drooping spikes bearing white flowers. Remsen. August.

Polyporus albellus Pk.

This species has been common this season while its near relative Polyporus chioneus Fr., which is usually plentiful, has been scarce. Peculiar weather conditions appear to be responsible for the comparative abundance of one and the scarcity of the other.

Polystictus parvulus Klotsch

This species has been unusually abundant in burnt places on Long Island whence specimens have been sent by W. H. Ballou. They are often confluent in tufts of two, three or more. Polyporus focicola B. & C. is considered synonymous with it in Sylloge.

Rubus sativus (Bail.) Brainerd

Thin woods. Karner. In fruit July and August.

Rynchospora fusca (L.) Ait. f.

Abundant along the shores of White lake. August.

Solidago juncea ramosa P. & B.

Association island, Henderson Harbor, Jefferson co. August. C. Guillet.

Stenophyllus capillaris (L.) Britton

Abundant in sandy soil of pastures. Round Lake. September.

Tipularia discolor (Pursh) Nutt.

This extremely rare orchidaceous plant is recorded in Torrey's Flora of the State of New York from a single locality, Parma, Monroe county. One additional station has been discovered for it by M. S. Baxter. This is at Adams Basin not far from Parma station. The past season Mr Roy Latham has discovered a third

station for it at Orient Point where he collected fine specimens of it, some of which he has kindly contributed to the State herbarium.

Trichostema dichotomum L.

Orient Point. September. R. Latham. The flowers of this plant are generally blue. From this the common name blue curls is evidently derived. The plants sent by Mr Latham have pink flowers.

Ustilago osmundae Pk.

Fresh specimens of this singular and imperfectly understood parasitic fungus were collected on the royal fern, Osmunda regalis L., by S. H. Burnham, in Cambridge, Washington co., in June. An examination of them revealed a feature previously overlooked. In the early stage of the fungus the cell, which eventually becomes two spores, is single. Soon it develops into a pair of globose echinulate reddish brown spores, 12–16 μ in diameter, these finally separate and with others form a dusty layer of spores over the surface of the young pinnae on which they develop. In developing its spores in pairs this species is unlike the genus Ustilago and is therefore referred to the genus Mycosyrinx and takes the name Mycosyrinx osmundae Pk.

Mycosyrinx osmundae cinnamomeae n. var.

This differs from the typical form in the paler brown color of the spore mass and the even surface of the spores. It occurs on the base of the pinnae of the cinnamon fern, Osmunda cinnamomea L. It is very rare. Only two small specimens were found. Cambridge. June. S. H. Burnham.

Vaccinium oxycoccus L.

This cranberry is common to Bonaparte swamp, Cranberry marsh, Averyville marsh and Peacock marsh. It is found in nearly all our sphagnum marshes and on the open mossy summits of most of the high mountains of the Adirondacks. It is a very hardy species and can maintain itself where the larger and cultivated species, Vaccinium macrocarpon Ait, can not. It is therefore available for cultivation where the other would be a failure. For the purpose of exhibiting the peculiar flora of Peacock marsh a list of its plants is here given. This list was made June 15, 1911.

Amelanchier oligocarpa (*Mx.*) *Roem.*
Andromeda glaucophylla *Link.*
Carex canes. disjuncta *Fern.*
C. exilis *Dew.*
C. pauciflora *Lightf.*
C. paup. irrigua (*Wahl.*) *Fern.*
C. stricta *Lam.*
Chamaedaphne calyculata (*L.*) *Moench*
Eriophorum callitrix *Cham.*
Kalmia angustifolia *L.*
Kalmia polifolia *Wang.*
Larix laricina (*DuRoi*) *Koch*
Ledum groenlandicum *Oeder*
Nemopanthes mucronata (*L.*) *Trel.*
Picea mariana (*Mill.*) *BSP.*
Sarracenia purpurea *L.*
Smilacina trifolia (*L.*) *Desf.*
Vaccinium canadense *Kalm.*
V. oxycoccus *L.*
V. pennsylvanicum *L.*

This marsh, in the town of North Elba, is a small one, probably not over three acres in extent, lying apparently less than a mile east of Averyville marsh. It is circular in outline and has no visible stream running through it. It is a shrubby marsh with numerous trees of tamarack and black spruce scattered over it and indicating that the time is not far distant when it may properly be called a swamp. Except a half dozen sedges there were but two herbaceous plants found. These are the three-leaved smilacina, Smilacina trifolia (L.) Desf., a liliaceous plant and the pitcher plant, Sarracenia purpurea L., neither of which was found in Averyville marsh. No grass was found there. Of the twenty-one species occurring on the marsh, thirteen are trees and shrubs and eight are herbaceous. Of these herbaceous plants, five are carices, only one of which was found on Averyville marsh. It is remarkable that such a dissimilarity should exist in the herbaceous vegetation of two marshes so near to each other in location and stages of development.

Vernonia altissima Nutt.

Roadsides. Middleville, Herkimer co. September. Miss M. C. Burns. This species has also been found by Dr J. V. Haberer in New Hartford, Oneida co. It is a rare plant with us.

Veronica virginica L.

Brown's grove. Scottsville, Monroe co. August. Miss F. Beckwith. A noble appearing plant commonly known as Culver's physic or Culver's root and having some reputation as a medicinal plant.

NEW SPECIES AND VARIETIES OF EXTRALIMITAL FUNGI

Cercospora eustomae

Spots suborbicular, definite, grayish or grayish brown, surrounded by an elevated line; hyphae amphigenous, densely aggregated on the spots or occupying large areas of the unspotted parts of the leaves, simple or septate, irregular or nodulose at the top, 30–60 x 4–6 μ; spores very variable, straight, curved or flexuous, often irregular or of unequal diameter in different parts, oblong or subcylindric, subhyaline, continuous or obscurely 1–2-septate, 20–60 x 4–6 μ.

Living leaves of Eustoma andrewsii A. Nels. and E. russellianum (L.) Griseb. September. Denver, Colorado. E. Bethel. Wood River, Nebraska. J. M. Bates.

The species is peculiar in the variability of its spores. The tufts of hyphae are sometimes so crowded that they appear to form an effused sooty stratum.

Cercospora pastinacae (Sacc.) comb. nov.

Spots small, inconspicuous, amphigenous, yellowish green or brown, bounded by veinlets; hyphae hypophyllous, aseptate, nodulose at the top, pale brown, 40–60 x 6–8 μ; spores oblong or cylindric, rarely narrowed toward the apex or when uniseptate having the apical cell narrower than the other, straight or curved, 1–3-septate, 25–85 x 6–8 μ.

Living leaves of parsnip, Pastinaca sativa L. Red Cloud, Nebraska. October. J. M. Bates.

This fungus was originally referred by Mr Ellis to Cercospora apii Fres. though with some hesitation, as he says that he is strongly of the opinion that it will yet prove to be distinct. Professor Saccardo later gave it the name Cercospora apii pastinacae Sacc. It appears to us to be a distinct species in its numerous small spots limited by the veinlets of the leaf, in its broader aseptate hyphae and specially in its broader subcylindric conidia with only 1–3-septa.

Cercosporella mirabilis

Spots angular, irregular, 2–10 mm long, sometimes confluent, at first yellowish or pallid, soon reddish brown; hyphae long, creeping, branched and interwoven or short, simple, erect, hypophyllous, hyaline; spores cylindric or gradually tapering from near the base to

the apex, multinucleate and sometimes 1–3-septate, more or less curved or flexuous, rarely curved at the apex, hyaline, 40–120 x 3–5 μ, sometimes rising from creeping hyphae, sometimes from minute sclerotioid bodies on the older and darker spots.

Living leaves of Crataegus rivularis Nutt. Morrison, Colorado. August. E. Bartholomew and E. Bethel.

This is a remarkable aberrant and variable species, and possibly the type of a new genus. The best development is from the younger spots or the margin of the older ones and in these cases its white flocculent masses are plainly visible to the naked eye. In the older spots minute black perithecialike dots scarcely visible to the naked eye appear. Under the microscope minute rather obscure hyphae appear to arise from these and bear smaller and less plentiful spores. Is this a sclerotioid state of this fungus?

Coryneum sorbi

Acervuli numerous, discoid, erumpent, orbicular or ellipsoid, .5–1 mm broad, black; spores oblong or oblong-ovoid, triseptate, often irregular, colored, 12–20 x 8–9 μ; sporophores short or obsolete.

Dead twigs of Sorbus californica Greene. Tulare co., California. August. J. D. Culbertson. Communicated by E. Bartholomew.

The disklike receptacles are crowded and surround the twigs. The small terminal cell of the spore is often semipellucid. Frequently the spore is abruptly contracted in some part of its outline. This gives it an irregular appearance.

Dermatea mori

Receptacle orbicular ellipsoid or slightly irregular, 1–2 mm broad, broadly convex or nearly plane, erumpent, surrounded by the remains of the ruptured epidermis but sometimes more elevated, black or brownish black; asci cylindric or subclavate, 60–90 x 20–25 μ; spores oblong or subcylindric, crowded or biseriate, continuous, hyaline, 20–30 x 8–10 μ.

On dead twigs of Russian mulberry, Morus alba tatarica Loud. Concordia, Kansas. April. E. Bartholomew.

The spores are sometimes slightly narrowed near the middle and then they resemble in outline the sole of a shoe. By the blackish color of the receptacle the species makes an approach toward the genus Cenangium, but the texture is somewhat waxy and indicates a closer relationship to Dermatea.

Diaporthe inornata

Perithecia collected in valsoid clusters 1–1.5 mm broad, 4–14 in a cluster, about .3 mm broad, black, whitish within, nestling in the inner bark with no circumscribing black line, the long crowded black ostiola piercing and obliterating the cortical stroma, erumpent, surrounded by the ruptured remains of the epidermis; asci subfusiform, 60–80 x 8–10 μ; spores crowded, oblong or subfusiform, with a short bristle at each end, constricted at the septum, 2–4-nucleate, 15–24 x 3–4 μ.

Dead branches of staghorn sumac, Rhus typhina L. Cabin John Bridge, Maryland. June. E. Bartholomew.

The species is apparently related to Diaporthe syngenesia (Fr.) Fckl. from which it differs in its smaller clusters, longer and differently shaped asci and in its longer spores. The stroma is cortical and surrounded by no black line. This suggests the specific name.

Diplodia polygonicola

Perithecia minute, abundant, densely gregarious, forming long patches on the stems, erumpent, black; spores oblong or broadly ellipsoid, at first hyaline, then colored, finally uniseptate, 14–16 x 8–9 μ.

Dead stems of dock leaved persicaria, Polygonum lapathifolium L. Blue Rapids, Kansas. July. E. Bartholomew.

Entoloma subtruncatum

Pileus subconic, thin, glabrous, hygrophanous, pale yellow ochre and striatulate when moist, paler and subshining when dry, truncate or slightly umbonate, the margin incurved, the cuticle separable; lamellae thin, broad, adnexed, moderately close, unequal, whitish becoming tinged with pink; stem slender, equal or slightly attenuated upward, terete or compressed, hollow, silky fibrillose, pale yellow, with a whitish mycelioid tomentum at the base; spores angular, apiculate at each end, 12–14 x 8–10 μ.

Pileus 2–3 cm broad; stem 3–8 cm long, 2–5 mm thick.

Solitary or gregarious. Under pine trees. Stow, Massachusetts. November. S. Davis.

The more or less truncate apex of the pileus affords a distinguished feature of this species and is suggestive of the specific name.

Gloeosporium psoraleae

Pustules minute, on brown or blackish brown orbicular spots, .25–.75 mm broad, partly concealed by the hairs on the lower surface of the leaf; spores oblong or subellipsoid, straight or slightly curved, hyaline, 14–20 x 4–5 μ.

Leaves of prairie apple, Psoralea esculenta Pursh. Webster, Nebraska. June. E. Bartholomew.

Graphyllium chloes junci

This variety differs from the type in its spores which are not distinctly constricted at the septa and in its paraphyses which are rudimentary or obsolete.

On stems of baltic rush, Juncus balticus Willd. Scotia, Nebraska. September. J. M. Bates.

Henningsinia caespitosa

Stroma subclavate, .5–1 cm high, 3–4 mm broad at the top, narrowed below into a stemlike base, cespitose or rarely only two united at the base, obtuse at the apex, sometimes with a slight umbo, black, sometimes shining; perithecia oblong, about 1 mm long, vertical in the upper part of the stroma, interior substance white beneath them; asci ovate or clavate, 35–40 x 14–16 μ; spores crowded in the ascus, oblong, continuous, colored, 10–12 x 6–7 μ.

Bark of West Indian birch, Bursera gummifera Jacq. Santiago de las Vegas, Cuba. November. C. F. Baker.

This species differs from Henningsinia durissima A. Moell. in its mode of growth, much smaller size, shorter perithecia, broader asci and broader spores.

Hysterium cubense

Perithecia gregarious or clustered, oblong or ellipsoid, straight, curved or rarely flexuous, at first erumpent, then superficial by the falling away of the epidermis, even, 1–2 mm long, .5 mm broad and high, black; asci cylindric, 160–200 x 15–20 μ; spores uniseriate, oblong or ellipsoid, 3-septate, colored, 30–40 x 12–16 μ, the terminal cells longer than the central cells.

Dead branches lying on the ground. Nazarene, Cuba. September. C. F. Baker.

This species is related to Hysterium pulicare Pers. from which it may be separated by the smooth perithecia, cylindric asci and uniseriate and larger spores.

Leptonia davisiana

Pileus thin, submembranous, convex becoming plane or broadly depressed, fragile, glabrous but slightly squamulose in the center, often widely striate when dry, blackish brown; lamellae thin, close, subventricose, adnexed, at first white then pinkish and pulverulent from the spores; stem slender, equal, glabrous, stuffed or hollow, colored like the pileus; spores angular, uninucleate, 10–12 x 8–10 μ.

Pileus 1–2.5 cm broad; stem 1.5–3 cm long, 1–2 mm thick.

Among short grass on a lawn. Brookline, Massachusetts. August. S. Davis, to whom the species is respectfully dedicated.

It differs from Leptonia abnormis Pk. in its smaller size, closer adnexed lamellae, squamulose disk and larger spores. The lamellae are somewhat tough in the dried state.

Leptostromella scirpina

Perithecia epiphyllous or rarely amphigenous, suborbicular or oblong, .20–.75 mm long, discoid or concave, subsuperficial, black; spores subbacillary, hyaline, curved, continuous, acutely narrowed at each end, 20–25 x 2–3 μ.

On dead leaves of dark green bulrush, Scirpus atrovirens Muhl. Superior, Nebraska. May. J. M. Bates.

The perithecia sometimes occur on a pallid spot, occasionally on both sides of the leaf. The species appears to be related to Leptostromella hysterioides (Fr.) Sacc. but the spores are neither guttulate nor cylindric.

Lysurus borealis serotinus

Specimens of this fungus in the egg state were collected in Salem, Mass., and contributed in fresh condition by Mr W. H. Ropes in October. These were placed in a damp chamber and two of them burst from the egg and completed their development. At first the arms, six in number, at the apex of the stem are curved inward their tips meeting at the center of the dome thus formed. In this position the margins of the arms are rolled backward but the edges are separated by a narrow white stripe, the central sterile exterior of the arm. The contiguous margins of any two adjacent arms are then in close contact and separated only by an inconspicuous impressed line, and the exterior surface of the dome is covered by a layer of the blackish or very dark olive green spores and the hymenial surface is apparently external, although interrupted longitudinally by the six white stripes. Anyone seeing the fungus in this condition for the first time would be likely to refer the species to

the genus Anthurus. But soon the tips of the arms separate and the upper part of the dome opens outward or becomes divergent, when it is plainly seen that the inner surface is really the hymenial surface and the species must therefore be referred to the genus Lysurus.

In these specimens the external part of the arms is white, while in the typical form it is described as pink. In them there are also six white lines or stripes radiating from the base of the stem and marking the inner surface of the volva. I find no mention of a similar character in the type specimens. This character and the white color of the exterior of the arms and the late appearance of the fungus lead me to separate this form under the name Lysurus borealis (Burt) v. serotinus n. var.

Macrophoma burserae

Perithecia minute, 100–200 μ broad, covered by the epidermis, gregarious or aggregated and forming unequal slightly prominent and often confluent pustules, black, white within; spores ellipsoid, hyaline or nearly so, 16–20 x 10–12 μ.

Bark of West Indian birch, Bursera gummifera Jacq. Santiago de las Vegas, Cuba. July. C. F. Baker.

A species easily recognized by its habit of forming broad pustules or slightly prominent patches beneath the epidermis.

Macrophoma numerosa

Perithecia minute, .3–.5 mm broad, numerous, closely gregarious, membranaceous, nestling in the bark, erumpent, black, whitish within; spores oblong-fusiform, continuous or binucleate, acute at the ends, 12–20 x 3–4 μ; sporophores very short or obsolete.

Dead branches of locust, Robinia pseudacacia L. Cincinnati, Ohio. June. E. Bartholomew.

The fungus occupies small branches, surrounding them and extending several inches on them.

Morchella conica serotina

Pileus conic or irregular, pointed at the apex or rounded and obtuse, sometimes perforated by a small circular aperture, often sterile with the hymenium brown and the edge of the costae whitish.

Roslindale, Massachusetts. October. Mrs U. C. Sherman and Miss J. F. Conant.

The late appearance of this fungus is remarkable and the variability of the pileus makes it desirable that it should have a distinct designation.

Ovularia avicularis

Spots large, suborbicular or oblong, pale brownish red; hyphae amphigenous, erect, forming minute white crowded tufts, 25–35 x 3–4 μ; spores oblong or ellipsoid, sometimes slightly narrowed toward the base, hyaline, 12–20 x 6–8 μ.

Living leaves of knotgrass, Polygonum aviculare L. Wood River, Nebraska. June. J. M. Bates.

This species differs from Ovularia rigidula Delacr. which occurs on leaves of the same host plant, in being amphigenous, in having shorter and more narrow hyphae, shorter and broader spores and differently colored spots.

Paxillus microsporus

Pileus fleshy, thin, convex becoming nearly plane, subglabrous, white becoming whitish, sometimes brownish in the center, slightly viscid when moist, the margin involute, spreading when mature and even or distantly striate with short elevated ridges and intervening depressions, flesh white; lamellae thin, narrow, close, adnate when young, decurrent when mature, occasionally forked or slightly anastomosing at the base, whitish, becoming pale yellowish brown or raw umber; stem short, usually tapering downward, solid or stuffed, colored like the pileus; spores brownish ochraceous, minute, subglobose, 2–3 μ in diameter.

Pileus 1–6 cm broad; stem 1–6 cm long, 3–8 mm thick.

Solitary or cespitose. Ground under chestnut trees. Waltham, Massachusetts. October. G. E. Morris. The species is remarkable for its small spores.

Phoma roystoneae

Perithecia minute, about .2 mm broad, amphigenous, gregarious, abundant, black; spores minute, oblong or subcylindric, hyaline, 5–8 x 1.5–2 μ supported on short hyaline sporophores.

On royal palm, Roystonea regia (HBK.) O. F. Cook. Santiago de las Vegas, Cuba. July. C. F. Baker.

Pluteus alveolatus eccentricus

Stem short, curved, eccentric; spores pale pink, in old or water soaked specimens paler or yellowish, globose or subglobose, minutely rough or pitted, 6–8 μ in diameter.

On decaying wood. Rockville, Indiana. September and October. G. T. Howell. In other respects it matches the description of the type.

Septoria magnospora

Spots small, 2–3 mm broad, pallid or whitish with a reddish brown border; perithecia epiphyllous, minute, .20–.25 mm broad, depressed, black; spores large, broadly filiform or subcylindric, curved, hyaline or faintly tinged with greenish yellow, continuous or pluriseptate, 45–80 x 3–4 μ.

Living leaves of Prunus fremontii Wats. San Diego co., California. January. S. C. Mason. Communicated by E. Bartholomew.

Tricholoma terraeolens majus

Pileus 2–6 cm broad, umbonate, nearly plane or sometimes depressed around the umbo when mature; stem 6–10 cm long, 4–6 mm thick, solid.

In other respects similar to the type. Stow, Massachusetts. October and November. S. Davis.

EDIBLE FUNGI

Tricholoma subsejunctum n. sp.

SUBDISJOINED TRICHOLOMA

Plate 124, figures 1–5

Pileus fleshy, conic or convex, often wavy and lobed on the margin, slightly viscid when moist, virgate or reticulate with blackish brown fibrils, blackish brown, often pale yellow or greenish yellow on the margin, flesh white, taste farinaceous; lamellae thin, close, rounded behind, adnexed, white, sometimes tinged with yellow anteriorly; stem stout, solid, nearly equal, white, sometimes tinged with yellow; spores minute, 5–6 x 4–5 μ.

Pileus 2.5–7 cm broad; stem 3–5 cm long, 6–12 mm thick.

The subdisjoined tricholoma is a rare species. It has been seen by the writer but once and then only in limited quantity. It was found growing gregariously among mosses and fallen leaves under evergreen and deciduous trees on the margin of a swamp near Mohawk Hill, Lewis county, in September.

The cap is 1–2.5 inches broad, at first conic but expanding with age, with the margin sometimes irregular, wavy or lobed and the surface covered with brown or blackish brown fibrils which radiate from the center toward the margin and sometimes form reticulations by connecting with each other. The general color is grayish brown or blackish brown, yellow on the margin and at first nearly black in the center. In wet weather it is a little viscid. Its gills are white, sometimes yellow at the outer extremity. They are slightly attached to the stem, which also is white and occasionally tinged with yellow. The stem is 1–2 inches long and 3–6 lines thick, solid and firm. The taste is farinaceous. The plants may be sought in September and October.

Tricholoma equestre albipes n. var.

WHITE STEM EQUESTRIAN TRICHOLOMA

Plate 124, figures 6–9

Pileus fleshy, convex becoming plane or nearly so, viscid when moist, glabrous or with a few spotlike scales in the center, flesh white, taste farinaceous; lamellae thin, close, sinuate, slightly adnexed, yellow; stem equal, solid, glabrous, white; spores ellipsoid, 6–8 x 4–5 μ.

Pileus 2.5–6 cm broad; stem 2.5–5 cm long, 6–8 mm thick.

The white stem variety of the equestrian tricholoma scarcely differs from the typical form of the species except in having a white stem. It is gregarious or cespitose in its mode of growth, its cap is viscid when moist, and 1–2.5 inches broad, its stem is 1–2 inches long and 3–4 lines thick. The cap is yellow or greenish yellow on the margin, reddish yellow in the center and there usually adorned by a few spotlike appressed scales. The flesh is white and like that of the preceding species has a farinaceous taste. It grows in thin woods or open places and occurs in September. North River.

Volvaria bombycina (Pers.) Fr.

SILKY VOLVARIA

Plate 125, figures 1–3

Pileus fleshy, campanulate or very convex, densely silky fibrillose, white or whitish, flesh white, taste mild; lamellae broad, close, free, whitish becoming bright pink; stem straight or curved, solid, silky fibrillose, white, volva large white or whitish; spores flesh colored or pink, ellipsoid, 8–10 x 5–6 μ.

The silky volvaria is a large species which usually grows in a solitary manner. It inhabits the sugar maple, Acer saccharum Marsh., and grows from dead places in living trees. It is a noble looking species. Its pileus is 2–4 inches broad; the stem 2–4 inches long, 4–6 lines thick. It bursts from a large persistent volva which is white or whitish and appears like a cup or loose wrapper at the base of the stem. Its specific name has reference to the copious silky fibrils which persistently cover the cap. The species may be found at any time during July, August and September. Its flesh is firm but tender, palatable and satisfying. Unfortunately its scarcity detracts from its availability as an esculent species. The spores in our plant are larger than the dimensions given for those of the European plant and the color of the pileus is paler.

Pholiota discolor Pk.

FADING PHOLIOTA

Plate 127, figures 10–15

Pileus thin, convex, becoming nearly plane, glabrous, viscid, hygrophanous, watery cinnamon and often striatulate on the margin when moist, pale yellow or subochraceous when dry, flesh white, taste mild; lamellae narrow, close, adnate, pallid becoming pale ferruginous; stem equal or slightly tapering upward, hollow, fib-

rillosely striate, pallid or brownish, often with a white mycelioid tomentum at the base; spores ellipsoid, 6–8 x 5–6 μ.

Pileus 2–4 cm broad; stem 2–5 cm long, 2–5 mm thick.

The fading pholiota is a small but common species growing in woods on decaying wood or branches. It is easily distinguished from Pholiota autumnalis Pk. by its viscid cap. The change of color in the cap by the escape of its moisture is very noticeable and is suggestive of the specific name. It grows singly or somewhat gregariously and very rarely in small tufts. In this case the caps are apt to be smaller than usual. It usually appears in August and September. Its caps are rarely more than one and a half inches broad.

Psilocybe polycephala (Paul.)

MANY CAP PSILOCYBE

Plate 127, figures 1–9

Pileus fleshy but thin, subcampanulate convex or nearly plane, glabrous, even, hygrophanous, at first whitish with a reddish yellow center, then darker or brownish and obscurely striatulate on the margin while moist, paler or whitish when the moisture has escaped, flesh white or whitish when dry, taste mild; lamellae thin, narrow, close, adnexed or nearly free, whitish becoming purplish brown; stem equal or flexuous, hollow, glabrous, mealy or pruinose at the top, white; spores purplish brown, ellipsoid, 7–8 x 4–5 μ.

Pileus 1–3 cm broad; stem 2.5–5 cm long; 2–4 mm thick.

The many cap psilocybe is a small mushroom but it sometimes occurs in such abundance as to make it available for culinary purposes. It is not highly flavored but it is harmless. It has been classed as a mere variety of Psilocybe spadicea Fr. from which it differs chiefly in its mode of growth and in its nearly free fuscous brown gills. When growing on the ground it forms densely crowded troops or patches several inches in diameter. This is given as the typical form. It also grows on trunks of trees, but it then appears to be more cespitose and to grow larger. This form is represented in our plate by figures 3–9. Other marks by which it differs from P. spadicea Fr. are its smooth, not scabrous, pileus, and its clear white stem. The form growing on tree trunks is larger than that growing on the ground and has the cap more strongly convex approaching bell shape. It is darker brown when moist and paler or whitish when dry. The dried specimens retain this color better than the dried specimens of the terrestrial form in

which the brown color is more permanent and more clearly shown. The moisture escapes first from the center of the cap, last from the thin margin.

The gills in the young plant are white or whitish, but they soon change to the purplish brown of the mature plant. The stem in the lignatile form is sometimes slightly stained toward the base. Our specimens were found in woods near Constableville, in September. The larger form was growing from a dead place in the trunk of a sugar maple tree about two feet from the ground; the smaller form was growing on the ground at the foot of the tree and on the same side. Specimens of both were collected at the same time.

Entoloma grayanum Pk.

GRAY ENTOLOMA

Plate 126, figures 1–7

Pileus fleshy, but thin toward the margin, broadly convex or nearly plane, sometimes broadly umbonate, glabrous, moist or subhygrophanous, whitish or grayish brown, flesh white, taste farinaceous; lamellae thin, moderately close, adnexed, whitish becoming flesh colored; stem equal or nearly so, solid, stuffed or hollow, silky fibrillose, white or pallid; spores angular, uninucleate, 7.5 μ in diameter.

Pileus 5–8 cm broad; stem 3–7 cm long, 4–10 mm thick.

The gray entoloma is a very variable mushroom, both in size, habit and color. The cap ranges from 1–3 inches broad and from watery white to grayish brown. Its stem also may be long, slender and flexuous or short, stout and straight and from 1.5–3 inches long and 2–6 lines thick. It may be solid, stuffed or hollow, and white whitish or pallid. The flesh of the cap is white when dry and its flavor is distinctly farinaceous. The gills are at first white but when mature they are pink. They never assume the brown color so characteristic of the common mushroom and other species of the genus Agaricus which have pink gills when young. The mode of growth is single, loosely gregarious or rarely cespitose. They usually grow among fallen leaves in mixed woods and may be found from July to September.

found growing in July & August 1912.
from ground where Cottonwood tree was cut down
North Overbrook Ave Trenton N.J. - grassy ground
between sidewalk & Curb. E.B.S.

Cortinarius albidipes n. sp.

WHITE STEM CORTINARIUS

Plate 128, figures 1–6

Pileus fleshy, compact, hemispheric becoming broadly convex, obtuse or subumbonate, viscid, glabrous and shining when dry, buff color, flesh white, taste mild; lamellae 4–6 mm broad, moderately close, pale violaceous when young, cinnamon when mature; stem commonly narrowed upward from a thickened or bulbous base, firm, solid, silky fibrillose, white; spores subglobose, 8–10 x 7–9 μ.

Pileus 5–10 cm broad; stem 5–8 cm long, 1–1.5 cm thick at the top.

The white stem cortinarius is a large fine species easily recognized by its buff colored viscid cap, its violaceous young gills and its white stem thickened or bulbous at the base. In similar species, having the young gills violet, the top of the stem is also violet. The wholly white stem therefore separates this species from all such related species. Sometimes the spores lodge on the remains of the white webby veil and form a conspicuous rust or cinnamon colored ring near the top of the solid stem. The cap is from 2–4 inches broad, the stem is 2–3 inches long and about 5 lines thick at the top. The plants grow among fallen leaves in woods. Collected near Constableville in September. Found but once.

Agaricus campester majusculus n. var.

LARGER MUSHROOM

Plate 129, figures 1–5

Pileus fleshy, firm, convex or nearly plane, fibrillose and squamose on the margin, even in the center, the margin surpassing the lamellae, the color is dark umber brown, flesh firm, white, not at all or but very slightly and slowly assuming a faint ruddy tint when cut, taste mild, agreeable; lamellae thin, close, free, pink, becoming brown or blackish brown; stem stout, equal, stuffed, fibrillose, white, with a white annulus, the white veil at first concealing the lamellae; spores broadly ellipsoid, 7–9 x 6–7 μ.

Pileus 6–15 cm broad; stem 2.5–7 cm long, 1–2 cm thick.

The larger mushroom is one of very many varieties of the common mushroom. It closely approaches the garden mushroom, var. hortensis Cke., but differs from it in its rather larger size, darker colored cap with even center and more coarsely scaly margin.

In the color of the cap it approaches the brown mushroom var. umbrinus Vitt., but that has an even cap and a squamulose stem. The cap also resembles that of var. villaticus Brond., but that also has the stem squamose below the collar. It inhabits rich soil and was found in October at Schenectady by Mrs Geo. E. Duryee. The flesh is firm but not tough. It affords a very substantial, enjoyable and satisfactory dish scarcely inferior in this respect to the common mushroom.

Boletus albidipes Pk.

Boletus granulatus albidipes Pk. N. Y. State Mus. Rep't 54, p. 168

WHITE STEM BOLETUS

Plate 130, figures 1–5

Pileus fleshy, convex becoming broadly convex or nearly plane, viscid or glutinous, yellowish white when young becoming pale ochraceous with age and then obscurely spotted by the drying gluten, flesh white, tubes plane, adnate, whitish in the young plant, becoming yellow and finally brownish ochraceous, the edges of the dissepiments naked or rarely with few glandular dots; stem short, equal, solid, white, with few or no glandular dots at the top; spores 8–10 x 3–4 μ.

Pileus 5–8 cm broad; stem 2.5–5 cm long, 8–12 mm thick.

The white stem boletus is related to the granular boletus, Boletus granulatus L. It may be separated from that species by its paler cap, white flesh and few or no glandular dots at the top of the stem and on the edge of the dissepiments of the tubes. Gregarious. Under or near white pine trees. The cap is 2–4 inches broad; stem 1–2 inches long, 4–6 lines thick. This is an excellent edible species and may be sought in September in pine groves or under or near white pine trees, specially in rocky places.

NEW YORK SPECIES OF CLITOCYBE

Clitocybe Fr.

Pileus generally fleshy, specially in the center, flexible or rather tough, convex plane or centrally depressed, umbilicate or infundibuliform, involute on the margin, flesh confluent with the stem; lamellae adnate or decurrent, not normally sinuate; stem normally central, externally more compact, fibrous, somewhat elastic, solid stuffed or hollow; veil sometimes present as a slight silkiness on the pileus or its margin.

Terrestrial or occasionally lignicolous, usually gregarious or cespitose. They occur chiefly in late summer and autumn. Many species are edible but a few are known to cause sickness and one is very sudorific. None are known to be fatally poisonous.

The species are numerous, variable in color and not always sharply limited from each other. This has given rise to numerous synonyms and much difficulty in the identification of some of the species.

They have been divided into two large groups or series. The first includes all species having a dry pileus and those having a moist but not clearly a hygrophanous pileus, that is a moist pileus which does not essentially change its color with the escape of the superfluous moisture. This series includes all of the large species and many of medium size with a few small ones.

The second series includes those species in which the pileus is truly hygrophanous. The flesh is thin, soft and watery and changes color with the escape of moisture. The pileus is convex plane umbilicate or centrally depressed and sometimes cup shape but not normally infundibuliform. In one section the flesh is separable into two horizontal layers. The species are mostly terrestrial, gregarious and of medium or small size.

KEY TO THE SECTIONS

Series A

Not truly hygrophanous

Plant solitary or subgregarious, pileus fleshy, regular, lamellae regularly adnate or decurrent.....Disciformes

Plant commonly cespitose, pileus often irregular or eccentric, lamellae irregularly adnate or decurrent.....Difformes

Plant soon infundibuliform or deeply and umbilicately depressed, lamellae regularly decurrent from the first..Infundibuliformes

Series B

Plant truly hygrophanous

Pileus thin, depressed or cup shape, lamellae adnate becoming decurrent ..... Cyathiformes

Pileus thin, convex flattened or depressed, glabrous, lamellae thin, close, horizontal, adnate or decurrent with a tooth..... Orbiformes

Section Versiformes differs from Orbiformes chiefly in having the pileus not glabrous. It is largely composed of species which we have placed in the genus Laccaria. Other New York representatives are wanting.

SERIES A

Not truly hygrophanous

Disciformes

Pileus subequally fleshy, convex, plane or depressed; lamellae at first adnate or regularly adnato-decurrent.

Solitary or gregarious, commonly terrestrial, rarely lignicolous. This section includes many species of very diverse size, habitat and appearance and they are not always sharply limited from each other. The pileus, in some of the more fleshy species, assumes a broadly obconic shape when mature. The pileus is dry in some, moist, but not truly hygrophanous, in others. The species have been assembled in groups depending on the color of the pileus.

KEY TO THE SPECIES

Pileus some shade of brown or cinereous..... 1
Pileus reddish or tan color..... 3
Pileus some shade of yellow..... 4
Pileus green or greenish..... odora
Pileus grayish or whitish..... 8
Pileus white or watery white when moist..... 12

1 Stem tapering upward 2
1 Stem not tapering upward..... media
2 Lamellae crowded ..... nebularis
2 Lamellae not crowded ..... clavipes
3 Taste and odor farinaceous, pileus even..... pinophila
3 Taste and odor not farinaceous, pileus rivulose..... rivulosa
4 Growing on decaying wood 5
4 Growing on the ground 6
5 Pileus minutely squamulose ..... decora
5 Pileus glabrous ..... sulphurea
6 Young pileus hairy or tomentose ..... subhirta
6 Young pileus glabrous 7
7 Taste bitter, stem stuffed..... fellea

7 Taste not bitter, stem solid .....biformis
8 Pileus more than 4 cm broad .....trogii
8 Pileus not more than 4 cm broad 9
9 Plant odorous 10
9 Plant inodorous 11
10 Stem solid .....aperta
10 Stem stuffed or hollow .....albidula
11 Pileus umbilicate, shining .....hirneola
11 Pileus not umbilicate, not shining .....sudorifica
12 Growing on wood 13
12 Growing on the ground or among fallen leaves 14
13 Pileus dry .....truncicola
13 Pileus moist when young or in wet weather.....leptoloma
14 Pileus dry .....albissima
14 Pileus moist when young or in wet weather.....15
15 Stem brown .....fuscipes
15 Stem not brown, white or whitish 16
16 Stem fibrillosely reticulate .....subcyathiformis
16 Stem not fibrillosely reticulate 17
17 Pileus more than 5 cm broad 18
17 Pileus less than 5 cm broad.....21
18 Stem solid 19
18 Stem stuffed or hollow 20
19 Lamellae very close, color white, persistent .....cerussata
19 Lamellae white becoming pallid .....difformis
19 Lamellae whitish .....robusta
20 Lamellae becoming yellowish with age.....phyllophila
20 Lamellae persistently white .....pithyophila
21 Taste acrid .....gallinacea
21 Taste not acrid 22
22 Stem bulbously thickened at the base .....regularis
22 Stem not bulbously thickened at the base.....23
23 Stem glabrous, shining, hollow.....candicans
23 Stem fibrous, pruinose or mealy above, stuffed .....dealbata

Clitocybe media Pk.

INTERMEDIATE CLITOCYBE

N. Y. State Mus. Rep't 48, p.173, pl.23, fig.1–7

Pileus fleshy, convex becoming plane or slightly depressed in the center, often wavy or irregular on the margin, not polished, grayish brown or blackish brown, flesh white, taste mild; lamellae broad, subdistant, adnate or decurrent, whitish, the interspaces often venose; stem equal or nearly so, solid, elastic, colored like or a little paler than the pileus; spores ellipsoid, 8 x 5 μ.

Pileus 5–19 cm broad; stem 2.5–5 cm long, 8–16 mm thick.

Gregarious or scattered. Mossy ground in woods. Essex co. September. Rare. Edible.

This species differs from the two following in its thinner pileus and equal stem.

Clitocybe nebularis (Batsch) Fr.

CLOUDED CLITOCYBE

N. Y. State Mus. Rep't 48, p.172, pl.23, fig.8–13

Pileus fleshy, compact, convex becoming plane or slightly depressed in the center, even, grayish or clouded with a grayish nebulosity, sometimes darker in the center becoming paler with age, sometimes with a yellowish tint, flesh white; lamellae close, narrow, adnate or slightly decurrent, white or pallid; stem firm, stuffed, generally tapering upward, fibrillosely striate, white or pallid; spores minute, ellipsoid, 4–5 x 2–3 μ.

Pileus 5–10 cm broad; stem 4–8 cm long, 10–20 mm thick.

Woods and bushy places. September. Rare. Edible.

Hitherto found in only two or three places in our State. The pileus is sometimes broadly obconic when mature.

Clitocybe clavipes (Pers.) Fr.

CLUB STEM CLITOCYBE

N. Y. State Mus. Mem. 4, p.139, pl.46, fig.1–6

Pileus very fleshy, convex or nearly plane, obconic, obtuse or with a small umbo, soft, grayish brown, sooty brown, sometimes darker in the center than on the margin, flesh white, taste mild; lamellae rather broad, subdistant, decurrent, white or cream colored; stem tapering upward from a thickened or subbulbous base, solid, elastic, soft and spongy within, glabrous or slightly fibrillose, colored like or a little paler than the pileus; spores ellipsoid, 6–8 x 4–5 μ.

Pileus 2.5–7.5 cm broad; stem 1–6 cm long, 6–12 mm thick at the top, 15–24 mm at the base.

Solitary, gregarious or rarely cespitose. Woods. Common. July to October. Edible.

This species is readily distinguished by its obconic pileus and upwardly tapering stem. Clitocybe carnosior Pk. is a synonym.

Clitocybe pinophila Pk.

PINE CLITOCYBE

N. Y. State Mus. Rep't 31, p.32

Pileus fleshy, thin, convex becoming umbilicate or centrally depressed, glabrous, pale tan color when moist, paler when dry, odor and taste farinaceous; lamellae moderately close, subarcuate, adnate or slightly decurrent, whitish; stem equal, glabrous or slightly pruinous, colored like the pileus; spores broadly ellipsoid or subglobose, 5–6 x 4–5 μ.

Pileus about 2.5 cm broad; stem 2.5–5 cm long, 2–4 mm thick.

Gregarious. Under or near pine trees. Not common. Albany, Essex and Warren counties. July and August.

Sometimes the pileus becomes striate on the margin in drying.

Clitocybe rivulosa (Pers.) Fr.

RIVULOSE CLITOCYBE

Sylloge V, p.153

Pileus thin, convex becoming plane or depressed, obtuse, often undulate on the margin, glabrous or at first adorned with whitish down, rivulose, rufescent, then pallid, flesh white, taste and odor agreeable; lamellae rather close, broad, slightly decurrent, white tinged with pink; stem equal, stuffed, subfibrillose, spongy within or hollow, tough, whitish; spores ellipsoid, 5–6 x 3.5–4 μ.

Pileus 2.5–6 cm broad; stem 2.5–5 cm long, 6–8 mm thick.

Gregarious. Woods. Adirondacks. Rare. Found but twice.

Clitocybe decora Fr.

DECORATED CLITOCYBE

N. Y. State Mus. Rep't 25, p.73 as Agaricus (Tricholoma) multipunctus Pk.

Pileus fleshy, thin, convex becoming plane or slightly depressed, dotted by minute brown or blackish hairy squamules, yellow, flesh yellow; lamellae close, narrow, obtusely adnate, yellow; stem equal, often curved, stuffed or hollow, fibrillose or squamulose, rarely glabrous, sometimes eccentric; spores subglobose, 5–6 x 4–5 μ.

Pileus 3–7 cm broad; stem 2.5–6 cm long, 4–6 mm thick.

Decaying trunks of coniferous trees. Hilly and mountainous regions. August.

Tricholoma multipunctum Pk. is a synonym. On account of its stem being occasionally eccentric the species might be sought among the Pleuroti.

Clitocybe sulphurea Pk.

SULFUR-COLORED CLITOCYBE

N. Y. State Mus. Rep't 41, p.62

Pileus convex, slightly umbonate, moist, pale yellow, flesh yellowish; lamellae subdistant, adnate, serrulate, pale yellow; stem equal or tapering upward, curved or flexuous, hollow, colored like the pileus; spores subglobose or broadly ellipsoid, 6–8 x 5–6 μ.

Pileus 2.5–5 cm broad; stem 2.5–7 cm long, 4–8 mm thick.

Decaying wood of spruce and balsam fir. Catskill mountains. September. Rare. Found but once.

Clitocybe subhirta Pk.

HAIRY CLITOCYBE

N. Y. State Mus. Rep't 32, p.25

Pileus convex or nearly plane, sometimes slightly depressed, incurved on the margin, at first hairy tomentose, then nearly glabrous, pale yellow or buff becoming whitish; lamellae close, adnate or decurrent, whitish or pale yellow; stem nearly equal, stuffed or hollow, sometimes eccentric; spores subglobose, 4–5 μ in diameter.

Pileus 2.5–7.5 cm broad; stem 2.5–5 cm long, 6–10 mm thick.

Woods. Onondaga co. September. Found but once.

Clitocybe fellea Pk.

BITTER CLITOCYBE

N. Y. State Mus. Rep't 51, p.284, pl.B, fig.8–11

Pileus thin, convex or hemispheric, obtuse or umbilicate, minutely furfuraceous, pale yellowish brown, flesh whitish, taste bitter; lamellae thin, subdistant, adnate or slightly decurrent, white; stem equal, firm, glabrous, flexuous, stuffed with a white pith, with a white mycelioid tomentum at the base; spores broadly ellipsoid, 6–8 x 4–5 μ.

Pileus 1.2–2.5 cm broad; stem about 2.5 cm long, 2–4 mm thick.

Gregarious. Woods. Saratoga co. July. Found but once.

The bitter taste suggests the specific name and is a convenient character by which to identify the species.

Clitocybe biformis Pk.

TWO-FORM CLITOCYBE

N. Y. State Mus. Bul. 150, p.25, pl.VI, fig.9–15

Pileus fleshy but thin, broadly convex or nearly plane becoming centrally depressed or subumbilicate, glabrous, even or obscurely striate on the involute margin, pale buff, more deeply colored in the center, flesh white; lamellae thin, close, narrow, decurrent, whitish or pallid becoming subcinnamon with age or in drying; stem equal, firm, solid or stuffed, often curved, sometimes eccentric, tomentose at the base, colored like or a little darker than the pileus; spores broadly ellipsoid or subglobose, 5–6 x 4–5 μ.

Pileus 2.5–7.5 cm broad; stem 2.5–3.5 cm long, 4–8 mm thick.

Growing in circles or arcs of circles in woods. Essex co. September. Found but once.

This species is remarkable for the change in form in passing from youth to old age, and also for the change in color of the lamellae. The pileus sometimes has a moist sodden appearance as if water-soaked. The mycelioid tomentum at the base of the stem causes a mass of decaying vegetable matter to adhere closely to the stem when pulled from its place of growth.

Clitocybe odora (Bull.) Sow.

SWEET CLITOCYBE

Sylloge V, p.153

Pileus fleshy, tough, convex becoming plane or nearly so, obtuse or subumbonate, even, glabrous, regular or sometimes wavy on the margin, moist in wet weather, green or dingy green, fading with age or in drying, flesh whitish, odor pleasant like anise; lamellae thin, not close, adnate or slightly decurrent, white or becoming pallid; stem equal or slightly thickened at the base, stuffed or hollow, elastic, glabrous, whitish or greenish; spores 6–8 x 4–5 μ.

Pileus 4–7 cm broad; stem 2.5–5 cm long, 4–8 mm thick.

Scattered or subgregarious. Woods and bushy places. Not rare. Albany, Suffolk and Saratoga counties and Adirondack mountains. August.

We have not found the typical form with lamellae "not close." In all our specimens reported under the names Agaricus virens Scop. and A. odorus Bull. or their equivalents Clitocybe virens (Scop.) and Clitocybe odora (Bull.) Sow. the lamellae are close and white or whitish and the stem is

either solid, stuffed or hollow. Even in the same collection we have found some of the stems solid and some decidedly hollow. All our collections of these had the agreeable odor ascribed to C. odora. We have therefore followed the English mycologists in not trying to make a distinction between C. virens Scop. or its equivalent C. viridis Fr. and C. odora. We consider all of our plants as a mere form of C. odora differing from the European species only in having the lamellae close.

Var. anisaria Pk. differs from our ordinary form in having the pileus adorned with innate fibrils and the margin more or less striate. It is Agaricus (Clitocybe) anisarius Pk.

Clitocybe trogii Fr.

TROG CLITOCYBE

N. Y. State Mus. Rep't 26, p. 53, as Agaricus (Clitocybe) connexus Pk.

Pileus fleshy, thin on the margin, convex becoming nearly plane, obtuse, glabrous or minutely silky, white or grayish white, opaque, odor fragrant, spicy; lamellae close, adnate or slightly decurrent, white or whitish, 2 or 3 mm broad; stem equal or nearly so, firm, solid, whitish, downy or villose at the base; spores ellipsoid, 6–8 x 4–5 μ.

Pileus 5–7 cm broad; stem 2.5–7 cm long, 3–5 mm thick.

Woods. Lewis co. September. Rare.

In the American specimens the margin of the pileus is sometimes tinged with bluish green when young and fresh. The species is closely allied to Clitocybe odora (Bull.) Sow. from which it differs in the grayish and more compact pileus and the constantly solid stem.

Clitocybe aperta Pk.

OPEN CLITOCYBE

N. Y. State Mus. Rep't 30, p.38

Pileus convex becoming plane or centrally depressed, often irregular, whitish, sometimes tinged with lilac and marked by one or two darker zones, odor farinaceous, taste disagreeable; lamellae close, narrow, adnate or slightly decurrent, whitish, often with a faint pinkish tinge; stem short, equal or attenuated downward, solid, whitish; spores 4 x 3 μ.

Pileus about 2.5 cm broad; stem 2.5–5 cm long, 2 mm thick.

Gregarious or cespitose. Grassy ground by roadsides and in pastures. Otsego co. September. Rare.

Clitocybe albidula Pk.

WHITISH CLITOCYBE

N. Y. State Mus. Rep't 53, p. 841, pl. C, fig. 16–20 as C. centralis Pk.

Pileus thin, convex or nearly plane becoming umbilicate or centrally depressed, glabrous, whitish tinged with brown wholly or in the center only and faintly striatulate on the margin when moist, whitish when dry, flesh whitish, taste and odor farinaceous; lamellae thin, close, adnate or slightly decurrent, whitish; stem short, equal, glabrous or slightly pruinose, stuffed or hollow, colored like the pileus; spores minute, ellipsoid, 5–6 x 2.5–3 μ.

Pileus 1–3 cm broad; stem 2–4 cm long, 2–4 mm thick.

Gregarious. In pine or mixed woods. September and October. Common.

Clitocybe centralis Pk. differs from the type only in having the center of the moist pileus sometimes tinged with brown. It is therefore united with it.

Clitocybe hirneola Fr.

LITTLE JUG CLITOCYBE

Sylloge V, p.145

Pileus thin, broadly convex becoming plane or nearly so, centrally depressed or umbilicate, even, shining, dry, tough, involute on the margin, gray or whitish, flesh white; lamellae thin, rather broad, slightly decurrent, whitish gray; stem slender, tough, equal, subflexuous, stuffed, glabrous, similar to the pileus in color, white pruinose or mealy at the top; spores ellipsoid, grayish white, 5 x 3 μ.

Pileus 6–10 mm broad; stem 2–4 cm long, 1–2 mm thick.

Scattered or gregarious. Among mosses. Essex co. September. Rare. Found but once.

A small species, the pileus scarcely reaching 12 mm in diameter.

Clitocybe sudorifica (Pk.)

SUDORIFIC CLITOCYBE

Plate VII, fig.1–6

Pileus fleshy but thin, broadly convex or nearly plane, often becoming slightly depressed in the center or umbilicate, irregular and

splitting or lobed on the thin spreading margin, glabrous, watery white when moist, whitish or grayish white when dry, flesh watery when moist, white when dry, taste mild, odor none; lamellae thin, narrow, close, adnate or slightly decurrent, whitish; stem short, equal or sometimes narrowed at the base, glabrous or merely pruinose, stuffed with a white soft or spongy center or hollow when old, often curved or somewhat flexuous, white or whitish; spores subglobose, 4–5 x 3–4 μ.

Pileus 2–4 cm broad; stem 1–3 cm long, 2–4 mm thick.

Gregarious. Lawns and grassy places. Albany, Ontario and Saratoga counties. September to November. Rarely the pileus has an obscure zone near the margin.

This species was at first confused with Clitocybe dealbata Sow. but after its sudorific property was discovered it was designated Clitocybe dealbata sudorifica Pk. N. Y. State Mus. Bul. 150, p. 43. Still further investigation leads me to consider it worthy of specific distinction. Dr W. W. Ford has found it sufficiently toxic to cause the death of frogs, rabbits and guinea pigs, though it may be eaten by man in moderate quantity with no more serious results than a profuse perspiration, sometimes continuing five or six hours. It should be considered medicinal and unwholesome and avoided as an article of food.

Clitocybe truncicola Pk.

TRUNK INHABITING CLITOCYBE

N. Y. State Mus. Rep't 26, p.54

Pileus thin, firm, expanded or slightly depressed in the center, glabrous, dry, white; lamellae close, thin, narrow, adnate or slightly decurrent, white; stem slender, equal, stuffed or hollow, glabrous, whitish, often curved and eccentric from the place of growth; spores broadly ellipsoid or subglobose, 4–5 x 3–4 μ.

Pileus 1.5–2.5 cm broad; stem about 2.5 cm long, 2 mm thick.

Trunks of deciduous trees, specially sugar maple. Adirondack mountains. September. Rare except in the mountains.

Clitocybe leptoloma Pk.

THIN MARGIN CLITOCYBE

N. Y. State Mus. Rep't 32, p.26

Pileus thin, plane or infundibuliform, umbilicate, glabrous, creamy white when moist, white when dry, very thin on the margin; lamellae

thin, narrow, close, some of them forked, decurrent, white; stem equal, glabrous, generally curved or flexuous, stuffed, colored like the pileus, with a white villosity at the base; spores minute, globose or subglobose, 3–4 μ broad or 4 x 3 μ.

Pileus 3–5 cm broad; stem 3–5 cm long, 2–4 mm thick.

Gregarious or cespitose. Prostrate trunks of trees. Adirondack mountains. August. Not common.

The width of the lamellae is about equal to the thickness of the flesh of the pileus. They gradually taper toward each end. The stem is occasionally eccentric.

Clitocybe albissima Pk.

VERY WHITE CLITOCYBE

N. Y. State Mus. Rep't 26, p.53

Pileus fleshy, convex or nearly plane, dry, soft, even, pure white, inodorous; lamellae moderately close, some of them forked at the base, adnate or slightly decurrent, white; stem equal, glabrous, solid, white; spores ellipsoid, 8 x 5 μ.

Pileus 5–7 cm broad; stem 3–6 cm long, 4–6 mm thick.

Gregarious or sometimes growing in arcs of circles. Woods. Common. August and September.

The pure white color and soft texture are retained by the dried specimens. Closely related to Clitocybe cerussata Fr. but never moist nor are the lamellae very crowded as in that species. It is an attractive, neat-looking species. Clitocybe subsimilis Pk. is specifically the same differing only in the more conic or turbinate shape of the pileus.

Clitocybe fuscipes Pk.

BROWN STEM CLITOCYBE

N. Y. State Mus. Rep't 44, p.17

Pileus thin, broadly convex or plane, umbilicate, glabrous, whitish and striatulate when moist, pure white when dry, odor and taste farinaceous; lamellae nearly plane, subdistant, adnate or slightly decurrent, white; stem equal, hollow, glabrous or slightly mealy at the top, brown when moist, paler when dry; spores globose, 5–6 μ broad.

Pileus 8–16 mm broad; stem about 2.5 cm long, about 2 mm thick.

Under pine trees. Cattaraugus co. September. Rare. Found but once.

Clitocybe subcyathiformis Pk.

SAUCER CLITOCYBE

N. Y. State Mus. Bul. 122, p.136, pl.110, fig.1–6

Pileus fleshy but thin, broadly convex or nearly plane becoming centrally depressed, glabrous, watery white and often obscurely striatulate on the thin soon spreading margin when moist, white when dry, sometimes slightly colored in the center, flesh white, taste mild; lamellae thin, narrow, moderately close, adnate or slightly decurrent, white or whitish; stem equal or slightly tapering upward, stuffed or hollow, fibrillosely reticulate, whitish, often with a whitish mycelioid tomentum at the base; spores ellipsoid, 6–8 x 4–5 μ.

Pileus 2.5–5 cm broad; stem 2.5–4.5 cm long, 4–8 mm thick.

Gregarious. Among fallen leaves under alders and birches. Albany and Warren counties. September and October. Rare. Edible.

Clitocybe cerussata Fr.

WHITE LEAD CLITOCYBE

Sylloge V, p.154

Pileus fleshy, convex or plane, obtuse, even, moist, glabrous, white, flesh soft, thick in the center, white, taste mild; lamellae thin, narrow, very close, adnate or decurrent, white, unchangeable; stem elastic, downy at the base, naked above, white; spores minute, subglobose, 4–5 x 3–4 μ.

Pileus 4–8 cm broad; stem 3–7 cm long, 6–10 mm thick.

Scattered or gregarious. Woods. Adirondack mountains. September and October. Not common.

The lamellae in our specimens are apparently less close than is required by the description of the European plant.

Clitocybe difformis (Schum.) Sacc.

DEFORMED CLITOCYBE

Sylloge V, p.191

Pileus fleshy, large, undulately lobed, at first sprinkled with flocci or sometimes glabrous, white; lamellae white becoming pallid; stem short, thick, longitudinally rugose or grooved, white; spores 4–5 x 3–4 μ.

Pileus 5–15 cm broad; stem of the larger ones about 2.5 cm long, 2–2.5 cm thick.

Cespitose. Woods. Saratoga co. July. Rare. Found but once.

Some English mycologists and even Fries himself regarded this as an overgrown irregular form of Clitocybe cerussata Fr. In the Sylloge it is treated as a distinct species.

Clitocybe robusta Pk.

ROBUST CLITOCYBE

N. Y. State Mus. Rep't 49, p.17

Pileus thick, firm, convex becoming plane or slightly depressed in the center, glabrous, involute or decurved on the naked margin, white or slightly clouded in the center, flesh white; lamellae close, narrow, adnate or decurrent, whitish; stem stout, solid or hollow, glabrous, equal or tapering upward, white; spores ellipsoid, yellowish, 6–8 x 4–5 μ.

Pileus 7–10 cm broad; stem 2.5–7 cm long, 16–24 mm thick.

Single, gregarious or cespitose. Among fallen leaves in woods. Common in hilly and mountainous districts. September to November.

This is related to Clitocybe candida Bres. but may be separated from it by the naked margin of the pileus, the absence of any marked odor and specially by its broader spores.

Clitocybe phyllophila Fr.

LEAF-LOVING CLITOCYBE

Sylloge V, p.155

Pileus fleshy, convex or plane, becoming depressed or umbilicate, obtuse, even, dry, silvery on the margin by the silky veil, white; lamellae moderately broad, subdistant, adnate or slightly decurrent, white becoming yellowish ochraceous; stem equal, stuffed or hollow, tough, downy and incurved at the base, spongy within, white, sometimes eccentric; spores ellipsoid, 6–8 x 3–5 μ.

Pileus 4–7 cm broad; stem 5–7 cm long, 4–8 mm thick.

Solitary or cespitose. Albany co. September. Rare.

Clitocybe pithyophila Fr.

PINE-LOVING CLITOCYBE

Sylloge V, p.155

Pileus fleshy, thin, nearly plane, umbilicate, glabrous, often wavy or lobed on the margin, white when moist, shining white when dry;

lamellae close, plane, adnate or slightly decurrent, persistently white; stem equal, glabrous, downy at the base, somewhat hollow, often compressed, white; spores 6–7 x 3–4 μ.

Pileus 4–7 cm broad; stem 4–5 cm long, 3–4 mm thick.

Gregarious or subcespitose. Pine woods. Catskill mountains. September.

Clitocybe gallinacea (Scop.) Fr.

ACRID CLITOCYBE

Sylloge V, p.158

Pileus fleshy with a thin margin, convex or nearly plane, not infundibuliform, even, dry, opaque, white or whitish, flesh white, taste acrid, odor strong; lamellae close, narrow, thin, adnate or slightly decurrent, whitish; stem equal, solid, at first floccosely mealy, whitish; spores subglobose or ellipsoid, 4–6 x 3–4 μ.

Pileus 2.5–4 cm broad; stem 2.5–5 cm long, 4–6 mm thick.

Gregarious. In grassy or mossy places. Essex co. September. Rare. Found but once.

Distinguished by its dingy white color and its acrid taste.

Clitocybe regularis Pk.

REGULAR CLITOCYBE

N. Y. State Mus. Bul. 54, p.948, pl.K, fig.1–7

Pileus thin, flexible, broadly convex becoming nearly plane, often depressed in the center, orbicular, regular, whitish when moist, white when dry, flesh white, taste mild; lamellae thin, narrow, crowded, decurrent, whitish; stem firm, equal, glabrous, solid or rarely hollow, whitish, spongy and thickened at the base; spores minute, 4–5 x 2.5–3 μ.

Pileus 1–2.5 cm broad; stem about 2.5 cm long, 3–5 mm thick.

Woods. Warren co. August. Rare. Found but once.

Related to Clitocybe tornata Fr. from which its thin flexible moist pileus, its decurrent lamellae and the spongy mass of mycelioid tomentum at the base of the stem will separate it.

Clitocybe candicans Pers.

WHITISH CLITOCYBE

Sylloge V, p.157

Pileus slightly fleshy, convex becoming plane or depressed, umbilicate, regular, rarely slightly eccentric, even, shining with a super-

ficial silky film, white when moist, shining white when dry; lamellae very thin, close, narrow, adnate becoming decurrent, white; stem even, equal, waxy, polished, hollow or nearly so, shining, often curved, rooting and villose at the base; spores 4–6 x 4 μ.

Gregarious. Among fallen leaves in woods. Common, September and October.

Said by Cooke to be farinaceous. By the character of the stem approaching Omphalia. In its form related to the section Cyathiformis, but not truly hygrophanous. Small and somewhat tough.

Clitocybe dealbata Sow.

IVORY CLITOCYBE

Sylloge V, p.157

Pileus slightly fleshy, convex becoming plane or with upturned and sometimes wavy margin, dry, even, glabrous, subshining, tough, white, taste mild; lamellae close, thin, adnate, white; stem fibrous, equal stuffed, pruinose or mealy at the top, white; spores ellipsoid, 4–5 x 2–2.5 μ.

Pileus 2.5–4 cm broad; stem 2–3 cm long, 2–3 mm thick.

Gregarious. Grassy places. Common. September and October.

Var. minor Cke. differs in its smaller more regular form, opaque pileus and agreeable farinaceous odor.

Var. deformata Pk. Pileus thin, very irregular, convex or centrally depressed, wavy or lobed on the margin, snowy white, flesh pure white, taste farinaceous; lamellae close, adnate or slightly decurrent, transversely venose, often anastomosing or connected by veins, frequently eroded on the edge and sometimes transversely split, whitish; stem irregular, sometimes compressed, more or less confluent at the base, stuffed or hollow, white, with a soft pure white downy tomentum below; spores subglobose, 3–4 μ long, nearly as broad.

On mushroom beds in a greenhouse. Wayne co. March. The specimens grew in mushroom beds made in a poorly lighted apartment, in which a temperature of 55°–60° was maintained. These conditions doubtless had some influence in causing the irregular, tufted mode of growth. The pure whiteness, thin pileus and the farinaceous taste and odor indicate a relationship with Clitocybe dealbata Sow. so intimate that it is recorded as a variety of it. That species is also sometimes found growing on mushroom beds.

Diffórmes

Pileus fleshy on the disk, thin on the margin, convex becoming expanded or centrally depressed, often irregular; lamellae irregularly adnate or decurrent; stem externally subcartilaginous, fibrous, commonly cespitose.

This section is easily recognized by its cespitose habit and the irregular character of the lamellae which are sometimes adnexed or sinuate on one side of the stem and decurrent on the other. The pileus is often irregular because of the crowded or tufted mode of growth. It is also sometimes umbonate and sometimes obtuse even in the same tuft. The stem too may be central or eccentric in the same tuft or the plant may sometimes be solitary.

KEY TO THE SPECIES

Mature pileus some shade of brown 1
Mature pileus some shade of yellow 3
Mature pileus white, whitish or grayish.....4
1 Stem brown or brownish, colored like the pileus.....monadelpha
1 Stem white or whitish, paler than the pileus.....2
2 Stem stuffed, plant commonly gregarious.....fumosa
2 Stem solid, plant commonly cespitose.....tumulosa
3 Mature pileus pale ochraceous .....patuloides
3 Mature pileus reddish yellow or saffron yellow.....illudens
4 Pileus spotted, plant growing on wood.....marmorea
4 Pileus not spotted, plant terrestrial.....5
5 Margin of moist pileus striatulate, curved upward in age.....revoluta
5 Margin of moist pileus even, spreading in age.....6
6 Stem not more than 6 mm thick, pileus usually white....multiformis
6 Stem more than 6 mm thick, pileus usually grayish.....multiceps

× Clitocybe monadelpha Morg.

Dangerous
Caution

UNITED CLITOCYBE

N. Y. State Mus. Mem. 4, p.140, pl.46, fig.7–12

Pileus fleshy, convex sometimes becoming centrally depressed, squamulose in the center, pale brown, reddish brown or honey color; lamellae moderately close, distinctly decurrent, pallid or pale flesh color; stem long, flexuous, fibrous, solid, often becoming hollow with age and twisted and tapering at the base, brown, pale brown or tinged with flesh color; spores broadly ellipsoid or slightly irregular, 7–9 x 5–6 μ.

Pileus 2.5–7 cm broad; stem 6–10 cm long, 4–6 mm thick.

Cespitose. Woods and open places. Near New York City, also Albany and Madison counties. September. Occasional.

The pileus sometimes has a dingy yellow or yellowish brown color. The species, as the author himself remarks, has the color and general appearance of Armillaria mellea Vahl. Armillaria mellea exannulata Pk. evidently belongs here. The species has been made a synonym of the European Agaricus tabescens Scop. by one author.

Clitocybe fumosa Fr.

SMOKY CLITOCYBE

Sylloge V, p.161

Pileus fleshy, convex becoming nearly plane, obtuse, somewhat gibbous when young, regular or irregular, even, glabrous, sooty brown soon becoming livid when moist, gray when dry, flesh whitish when dry; lamellae close, adnate or decurrent, grayish white; stem nearly equal, solid or stuffed, fibrous, fleshy, glabrous, mealy at the top, dingy white; spores subglobose, 6–7 μ broad.

Pileus 2.5–7.5 cm broad; stem 2.5–7.5 cm long, 4–10 mm thick.

Gregarious or rarely cespitose. Albany co. September.

Var. brevipes n. var. Stem short not exceeding 2.5 cm in length. Otherwise like the typical form. Ontario co. October. The stem in this variety seems to be constantly short so that the pileus appears to rest on the ground.

The specimens reported as Clitocybe ampla Pers. belong to C. fumosa Fr.

Clitocybe tumulosa Kalchb.

MOUND CLITOCYBE

Sylloge V, p.162

Pileus conic or convex becoming expanded, obtuse or umbonate, even, glabrous, brown, becoming paler; lamellae close, sinuate adnate and decurrent in the same plant, cinereous white; steam equal or nearly so, solid, floccose pruinose, pallid; spores ellipsoid, 6–7 x 4 μ.

Pileus 2.5–5 cm broad; stem 2.5–5 cm long, 6–8 mm thick.

Densely cespitose. Pine groves. Essex co. September. Very rare. Found but once.

Clitocybe patuloides Pk.

SPREADING CLITOCYBE

N. Y. State Mus. Rep't 54, p.163, pl.E

Pileus fleshy, firm, rather thick, convex becoming nearly plane or somewhat centrally depressed, glabrous, even and white or pale yel-

low when young with incurved margin, becoming yellowish or pale ochraceous and often squamose or rimosely areolate, flesh white, taste mild, odor mushroomlike; lamellae thin, close, slightly or strongly decurrent, forked or anastomosing at the base, white; stem usually short, equal or slightly tapering upward, solid, occasionally eccentric, white; spores broadly ellipsoid, 6–8 x 5–6 μ.

Pileus 2.5–10 cm broad; stem 2.5–7.5 cm long, 8–20 mm thick.

Gregarious or cespitose. Woods or their borders, specially of pine. Onondaga and Essex counties. September. Not common. It is remarkable for the different colors of the young and the mature pileus.

Clitocybe illudens (Schw.) Fr.

DECEIVING CLITOCYBE

N. Y. State Mus. Mem. 4, p.179, pl.68

Pileus convex or nearly plane, sometimes centrally depressed, obtuse or umbonate, glabrous or obscurely virgate, often irregular, saffron yellow or orange yellow, flesh white or yellowish, odor strong, taste disagreeable; lamellae close, decurrent, narrowed toward each end, colored like the pileus; stem long, firm, glabrous, solid, stuffed or rarely hollow, often attenuated toward the base, sometimes eccentric, colored like the pileus or sometimes brownish toward the base; spores globose, 4–5 μ in diameter.

Pileus 7–12 cm broad; stem 7–14 cm long, 6–12 mm thick.

Cespitose. Woods and open places. Often about old stumps. July to October.

A beautiful but unwholesome species. It causes nausea and vomiting if eaten. It is possible to make it comparatively harmless by heating it in salt water for a half hour, then taking it out and frying it in butter. It is phosphorescent. Large fresh specimens when placed in a dark place emit a glowing light.

Clitocybe marmorea Pk.

MOTTLED CLITOCYBE

N. Y. State Mus. Rep't 24, p.61

Pileus fleshy, firm, broadly convex, glabrous, white, mottled with darker watery spots, flesh white; lamellae close, narrow, arcuate, unequally decurrent, white; stem firm, solid, long, generally curved,

slightly thickened at the base, white, sometimes pruinose; spores globose, 4 μ in diameter.

Pileus 5–10 cm broad; stem 10–15 cm long, 12–20 mm thick.

Cespitose. Prostrate trunks of trees in woods. Lewis co. September. Very rare. Found but once and then in small quantity.

The tufts are composed of few individuals.

Clitocybe revoluta Pk.

REVOLUTE CLITOCYBE

N. Y. State Mus. Rep't 46, p.23

Pileus convex or nearly plane, glabrous, whitish and slightly striatulate on the margin when moist, white when dry, the thin margin commonly and irregularly revolute; lamellae thin, narrow, close, adnate or slightly decurrent; stem glabrous, solid when young, stuffed or somewhat hollow when old, whitish; spores subglobose, 4–5 μ long.

Pileus 2.5–7 cm broad; stem 5–7 cm long, 6–10 mm thick.

Densely cespitose. Woods. Albany co. September. Rare. Found but once.

The pileus is often irregular from its densely tufted mode of growth. Occasionally the plant is solitary and then it is more regular with the margin spreading but not revolute.

Clitocybe multiformis Pk.

MULTIFORM CLITOCYBE

N. Y. State Mus. Mem. 4, p.141, pl.47, fig.1–9

Pileus thin, convex or nearly plane, often lobed or irregular, glabrous, whitish, grayish or yellowish when moist, paler when dry, flesh white when dry; lamellae thin, narrow, close, adnate or slightly decurrent, white or whitish; stem equal, solid, glabrous, white; spores ellipsoid, 5–6 x 3–4 μ.

Pileus 2.5–7 cm broad; stem 2.5–5 cm long, 4–6 mm thick.

Cespitose. Low damp places in woods. Albany co. October. Edible. Found but once.

The stem is often flexuous and compressed. The center of the pileus is sometimes tinged with brown. The mushroom does not retain its color well in drying. Its pileus is much thinner than that of Clitocybe multiceps Pk.

Clitocybe multiceps Pk.

MANY CAP CLITOCYBE

N. Y. State Mus. Bul. 139, p.37, pl.117, fig.7–9

Pileus fleshy, firm, convex, moist in wet weather, whitish, grayish, yellowish gray or grayish brown, sometimes slightly silky and brownish in the center, often irregular from mutual pressure, flesh white, taste oily, slightly disagreeable; lamellae close, adnate or slightly decurrent, white or whitish; stem equal or slightly thickened at the base, firm, glabrous, solid or stuffed, slightly pruinose at the top, white or whitish; spores globose, 5–8 μ in diameter.

Pileus 2.5–7 cm broad; stem 5–10 cm long, 6–12 mm thick.

Cespitose, rarely solitary. Open ground or in grassy places. June to October. Common. Edible.

The tufts may be composed of many or few individuals. The lamellae are sometimes sinuate on one side of the stem, thereby indicating a close relationship with the genus Tricholoma. In var. tricholoma Pk. nearly or quite all the lamellae are sinuate. Such specimens might easily be referred to that genus, but the habit and all other characters indicate its place here. The flavor of the uncooked mushroom varies. In some it is very disagreeable, in others but slightly so. Some pronounce it among the best of mushrooms when cooked, others say it is unfit to eat.

Infundibuliformes

Pileus becoming infundibuliform or evenly depressed or umbilicate in the center; lamellae deeply and evenly decurrent from the first; stem spongy, externally fibrous.

The funnel form pileus is characteristic of many of the species of this section and is suggestive of its name. The lamellae are equally decurrent, unlike, in this respect, those of the preceding section. The pileus is not truly hygrophanous, but in some species it is moist or subhygrophanous and becomes paler with the escape of the moisture, in others it is dry.

KEY TO THE SPECIES

Pileus dry 1
Pileus moist when young or in wet weather 7
1 Mature pileus normally infundibuliform 2
1 Mature pileus not normally infundibuliform 4
2 Pileus white ..... catina
2 Pileus not white 3
3 Pileus 8 cm or more broad ..... maxima
3 Pileus less than 8 cm broad ..... infundibuliformis

4 Plant terrestrial 5
4 Plant lignatile 6
5 Pileus reddish or brick red, spores 8–10 μ long.....sinopica
5 Pileus reddish or brick red, spores 6–8 μ long.....sinopicoides
6 Pileus glabrous, lamellae white.....eccentrica
6 Pileus virgate and dotted, lamellae not white.....ectypoides
7 Dry pileus white 8
7 Dry pileus not white 9
8 Lamellae 6 mm broad.....tuba
8 Lamellae less than 6 mm broad.....adirondackensis
9 Lamellae yellowish or pale ochraceous.....gilva
9 Lamellae white or whitish.....splendens
9 Lamellae reddish .....inversa

Clitocybe catina Fr.

BOWL SHAPE CLITOCYBE

Sylloge V, p.174

Pileus fleshy but thin toward the margin, plane becoming infundibuliform, flaccid, dry, glabrous, white becoming tinged with pink or tan color in rainy weather, flesh white, odor agreeable; lamellae moderately close, decurrent, white; stem stuffed or solid spongy within, elastic, slightly thickened at the base, white; spores ellipsoid, 6–8 x 4–5 μ.

Pileus 4–5 cm broad; stem 4–7 cm long, 6–9 mm thick.

In or near woods. Adirondack mountains. August. Found but once.

The specimens were young but apparently belong here and are admitted with some hesitation. Related to Clitocybe infundibuliformis (Schaeff.) Fr. but easily distinguished by its white color. The spore dimensions here given are taken from American specimens.

Clitocybe maxima (G. & M.) Fr.

LARGE CLITOCYBE

Sylloge V, p.165

Pileus fleshy in the center, thin toward the margin, broadly infundibuliform, subumbonate, dry, pale tan color or whitish; lamellae close, soft, long decurrent, whitish; stem attenuated upwards, fibrillose, solid, whitish; spores subglobose, 4–6 x 3–4 μ.

Pileus 10–30 cm broad; stem 5–10 cm long, 12–25 mm thick.

Woods and grassy places. Adirondack and Catskill mountains. July and August. Not common.

Remarkable for and at once recognized by its large size.

Clitocybe infundibuliformis (Schaeff.) Fr.

FUNNEL FORM CLITOCYBE

N. Y. State Mus. Rep't 48, p.174, pl.24, fig.1–6

Pileus at first convex and slightly umbonate, becoming infundibuliform, thin and minutely silky on the margin, dry, reddish or pale tan color, fading with age, flesh white; lamellae thin, moderately close, decurrent, white or whitish; stem generally tapering upward, spongy or stuffed, soft, elastic, colored like the pileus or rarely whitish; spores 5–6 x 3–4 μ.

Pileus 4–7 cm broad; stem 5–7 cm long, 6–10 mm thick.

Single or scattered, rarely tufted. Among fallen leaves in woods. July and August. Common. Edible.

Var. membranacea Fr. Pileus thinner, not umbonate and stem more slender, equal.

Clitocybe sinopica Fr.

SINOPICAN CLITOCYBE

Sylloge V, p.167

Pileus fleshy but thin, plane or centrally depressed, often umbilicate, dry, glabrous or becoming flocculose and rivulose, ochraceous red sometimes becoming paler with age, flesh white, odor farinaceous; lamellae close, rather broad, slightly decurrent, white becoming yellowish; stem equal, somewhat fibrillose, stuffed, colored like the pileus; spores 8–10 x 5–6 μ.

Pileus 2–4 cm broad; stem 2.5–5 cm long, 2–4 mm thick.

Woods and on burned ground in open places. June to September. Adirondack mountains.

Clitocybe sinopicoides n. sp.

SINOPICANLIKE CLITOCYBE

Pileus thin, convex with decurved margin, umbilicate, floccose squamulose specially in the center, obscurely fibrillose on the margin, firm, tawny red or brick red, flesh white, taste and odor farinaceous; lamellae moderately close, arcuate, decurrent, white, the interspaces slightly venose; stem equal or slightly tapering upward, subfloccose or glabrous, solid or stuffed, colored like the pileus; spores 6–8 x 3–4 μ.

Pileus 2–4 cm broad; stem 2–4 cm long, 2–5 mm thick.

Among mosses in low wet places. Essex co. June.

This species closely resembles Clitocybe sinopica Fr. and probably has been taken for a small vernal form of that species. It may be separated from it by its wet mossy habitat, its smaller size and specially by its smaller spores. These are more or less obovate and pointed at one end. The farinaceous odor and taste is sometimes wanting as in C. incilis Fr. but it has not the crenate margin nor the hollow stem of that species.

Clitocybe eccentrica Pk.

ECCENTRIC CLITOCYBE

Torr. Bot. Club Bul. 25, p.321

Pileus very thin, umbilicate or subinfundibuliform, glabrous, watery white and shining when moist, white when dry, the thin margin often lobed, irregular or deeply cleft on one side; lamellae narrow, close, decurrent, white; stem slender, tough, solid, glabrous, strigosely hairy at the base, often eccentric, white, long branching strands of white mycelium often permeating the matrix; spores 4–5 x 2.5–3 μ.

Pileus 2.5–5 cm broad; stem 2.5–4 cm long, 2–4 mm thick.

Gregarious or cespitose. Much decayed wood. Essex, Warren and Wayne counties. July to October.

Clitocybe ectypoides Pk.

ECTYPOID CLITOCYBE

N. Y. State Mus. Rep't 24, p.61

Pileus fleshy but thin, broadly umbilicate or infundibuliform, with a spreading margin, finely virgate and squamulose punctate, the blackish points on the radiating fibrils, moist, grayish or grayish yellow; lamellae close, narrow, decurrent, some of them forked, yellowish; stem equal, firm, solid, colored like the pileus, with a white mycelium at the base; spores broadly ellipsoid, 5–8 x 4–5 μ.

Pileus 2.5–5 cm broad; stem 2–3 cm long, 2–4 mm thick.

Gregarious or cespitose. Decaying wood in woods. July to September. Common in mountainous districts.

Clitocybe tuba Fr.

TRUMPET CLITOCYBE

Sylloge V, p.175

Pileus thin, convex or nearly plane, umbilicate, even on the margin, whitish when moist, shining white when dry, flesh white;

lamellae close, 5–6 mm broad, very decurrent, white becoming pallid; stem equal, tough, stuffed or hollow, glabrous, white; spores subglobose, 4 x 3 μ.

Pileus 2.5–5 cm broad; stem 4–6 cm long, 2–5 mm thick.

Gregarious. Among fallen leaves in woods, specially pine woods. Warren co. September. Rare.

Similar to Clitocybe pithyophila Fr. from which it may be separated by its long decurrent lamellae. From C. adirondackensis Pk. it is separated by its broader lamellae.

Clitocybe adirondackensis Pk.

ADIRONDACK CLITOCYBE

N. Y. State Mus. Rep't 54, p.174, pl.69, fig.1–13

Pileus thin, convex or nearly plane and umbilicate, or soon very concave and infundibuliform, glabrous, moist in wet weather, white or pale tan color, flesh white; lamellae thin, close, narrow, very decurrent, white; stem equal or nearly so, glabrous, stuffed or hollow, colored like the pileus; spores subglobose or broadly ellipsoid, 4–5 x 3–4 μ.

Pileus 2.5–5 cm broad; stem 4–7 cm long, 2–4 mm thick.

Scattered or gregarious. Woods in hilly or mountainous districts. July to October. Common. Edible.

The lamellae are scarcely broader than the thickness of the flesh of the pileus. The white pileus is sometimes slightly tinged with brown in the center.

Clitocybe gilva (Pers.) Fr.

YELLOWISH CLITOCYBE

N. Y. State Mus. Rep't 54, p.174, pl.69, fig.14–21 as C. maculosa Pk.

Pileus fleshy, compact, convex becoming centrally depressed, glabrous, often marked with small round spots, minutely downy on the involute young margin which is sometimes obscurely striate, whitish or cream color, flesh white or tinged with the color of the pileus, taste mild; lamellae close, narrow, decurrent, whitish or yellowish, some of them forked; stem equal or slightly tapering upward, glabrous, stuffed or hollow, whitish, sometimes tomentose at the base; spores subglobose, 4–5 μ in diameter.

Pileus 2.5–7 cm broad; stem 5–7 cm long, 4–8 mm thick.

Woods. Adirondack mountains. August and September. Rare. Edible.

The American plant is commonly paler than the European and was described under the name Clitocybe maculosa Pk. Its stem is sometimes hollow but its essential characters are so close to those of C. gilva (Pers.) Fr. that it seemed best to unite them. Agaricus (Clitocybe) subzonalis Pk. also is now considered a mere form of this species having the pileus obscurely zonate.

Clitocybe splendens (Pers.) Fr.

SHINING CLITOCYBE

Sylloge V, p.172

Pileus fleshy but thin, nearly plane becoming centrally depressed and infundibuliform, glabrous, pale yellowish or yellow and shining, flesh white; lamellae narrow, simple, close, very decurrent, white; stem equal or slightly tapering upward, glabrous, solid, colored like the pileus; spores subglobose, 4–5 μ in diameter.

Pileus 5–8 cm broad; stem 4–5 cm long, 8–10 mm thick.

Solitary. Woods among fallen leaves. Essex co. June. Rare.

Clitocybe inversa Scop.

INVERTED CLITOCYBE

Sylloge V, p.172

Pileus fleshy, convex becoming infundibuliform, fragile, glabrous, obtuse, moist when fresh, involute on the thin margin, brick color, reddish or tan color, flesh colored like the pileus; lamellae close, simple, decurrent, pallid becoming reddish; stem equal or nearly so, slightly rigid, spongy, stuffed or hollow, glabrous, whitish; spores subglobose, 3–5 μ in diameter.

Pileus 4–6 cm broad; stem 4–5 cm long, 4–8 mm thick.

Gregarious or cespitose. Woods or open places. Fulton co. August. Rare.

SERIES B

Plant truly hygrophanous

Cyathiformes

Pileus hygrophanous, centrally depressed or cup shape, flesh thin, separable into two horizontal layers; lamellae adnate or decurrent.

The species of this section are separated from those of the preceding sections by the hygrophanous character of the pileus with its

separable layers and by its more cuplike shape. Only four species are known to belong to our flora.

KEY TO THE SPECIES

Stem fibrillosely reticulate ..... cyathiformis
Stem not fibrillosely reticulate 1
1 Plant cespitose, pileus usually irregular ..... caespitosa
1 Plant not cespitose 2
2 Pileus convex, deeply umbilicate, not infundibuliform ..... subconcava
2 Pileus becoming infundibuliform ..... brumalis

Clitocybe cyathiformis Fr.

CUP SHAPE CLITOCYBE

Sylloge V, p.176

Pileus fleshy but thin, centrally depressed or infundibuliform, hygrophanous, glabrous or nearly so, even on the margin or occasionally striate when old, blackish brown or grayish brown when moist, paler when dry, flesh colored like the pileus, separable into two horizontal layers; lamellae distant, adnate or decurrent, united behind, dingy or grayish brown; stem equal or slightly tapering upward, stuffed or hollow, fibrillose, obscurely reticulate by the fibrils, colored like the pileus; spores ellipsoid, 8–9 x 4–5 μ.

Decaying wood or on the ground. In woods or open places. August and September. Common.

Clitocybe poculum Pk. is referable to this species.

Clitocybe caespitosa Pk.

CESPITOSE CLITOCYBE

N. Y. State Mus. Rep't 41, p.61

Pileus thin, infundibuliform, often irregular, hygrophanous, grayish brown when moist, cinereous or clay color when dry; lamellae narrow, close, decurrent, some of them branched, white; stem equal or slightly tapering upward, stuffed or hollow, white; spores subglobose or broadly ellipsoid, 3–4 μ long.

Pileus 2.5–4 cm broad; stem 2–3 cm long, 4–6 mm thick.

Commonly cespitose. Woods. Catskill and Adirondack mountains. August and September. Rare.

This mushroom is remarkable for its irregular and deformed appearance. The pileus is sometimes perforate and the stem is stout in proportion to the size of the pileus. The tufts are composed of but few individual plants.

Clitocybe subconcava Pk.

SUBCONCAVE CLITOCYBE

N. Y. State Mus. Bul. 54, p.948, pl.K, fig.8–13

Pileus thin, convex, deeply umbilicate, glabrous, hygrophanous, brownish or reddish brown and usually striatulate on the decurved margin when moist, whitish when dry; lamellae arcuate, decurrent, close, pallid or subcinereous; stem equal, firm, solid or stuffed, sometimes with a small cavity, slightly fibrillose, colored like the pileus; spores ellipsoid, 5–6 x 3–4 μ.

Pileus 2.5–5 cm broad; stem 2.5–5 cm long, 3–4 mm thick.

Pine woods. Warren co. August. Rare. Found but once.

Related to Clitocybe concava (Scop.) Fr. from which it may be separated by its paler lamellae and smaller spores.

Clitocybe brumalis Fr.

WINTRY CLITOCYBE

Sylloge V, p.180

Pileus at first convex or expanded and umbilicate, then infundibuliform, glabrous, hygrophanous, livid when moist, whitish or yellowish when dry, often darker in the center, sometimes wavy or lobed on the margin, flesh thin; lamellae arcuate at first, narrow, close, decurrent, distinct, pallid or yellowish white; stem nearly equal, often slightly curved, stuffed or hollow, glabrous, whitish, sometimes downy at the base; spores 4–5 x 3–4 μ.

Pileus 2.5–5 cm. broad; stem 2–5 cm long, 2–4 mm thick.

Woods. Catskill and Adirondack mountains. September and October. Rare.

Our specimens were collected in the months mentioned, but the specific name indicates that it may also occur later in the season.

Orbiformes

Pileus hygrophanous, somewhat fleshy, convex or plane, umbilicate or centrally depressed, glabrous; lamellae thin, close, adnate or having a decurrent tooth.

The species of this section may be separated from those of the preceding by the more spreading decurved margin of the pileus, which is therefore more orbicular. They may be divided into three groups according to the color of the lamellae. They are mostly small and scarce.

KEY TO THE SPECIES

Lamellae yellow or yellowish.....flavidella
Lamellae grayish or brownish.....1
Lamellae white or whitish.....4
1 Plant with a farinaceous odor.....ditopoda
1 Plant without a farinaceous odor.....2
2 Pileus umbilicate .....peltigerina
2 Pileus not umbilicate 3
3 Stem pruinose or mealy at the top.....metachroa
3 Stem naked at the top.....vilescens
4 Plant inodorous .....angustissima
4 Plant fragrant 5
5 Margin of the moist pileus striate .....subditopoda
5 Margin of the moist pileus even 6
6 Pileus brownish when moist.....compressipes
6 Pileus whitish when moist.....fragrans

Clitocybe flavidella Pk.

YELLOWISH CLITOCYBE

N. Y. State Mus. Rep't 30, p.38

Pileus thin, convex becoming plane or centrally depressed, often irregular, glabrous, hygrophanous, dingy yellow when moist, paler or whitish when dry; lamellae close, narrow, adnate or slightly decurrent, yellow or yellowish; stem equal, glabrous, hollow, colored like the pileus; spores unknown.

Pileus about 2.5 cm broad; stem 2–3 cm long, 3–4 mm thick.

Gregarious. Low wet ground. Otsego co. September. Rare. Found but once.

Clitocybe ditopoda Fr.

DOUBLE STEM CLITOCYBE

Sylloge V, p.186

Pileus thin, convex becoming plane or centrally depressed, glabrous, hygrophanous, brownish when moist, gray when dry, odor farinaceous; lamellae thin, close, about 2 mm wide, slightly decurrent, brownish gray; stem equal, glabrous, hollow, often compressed, colored like the pileus; spores broadly ellipsoid, 5–6 x 3–5 μ.

Pileus 2–5 cm broad; stem 2–3 cm long, 2–4 mm thick.

Woods and among fallen leaves. Albany and Warren counties. September and October. Rare.

The stem in the Warren county specimens is sometimes compressed and grooved as if composed of two united stems. Such specimens are suggestive of the specific name. The spore dimensions

here given are taken from American specimens. Some authorities say spores "sphaeroid, 2–3 μ in diameter."

Clitocybe peltigerina Pk.

PELTIGERINE CLITOCYBE

N. Y. State Mus. Rep't 30, p.38

Pileus thin, nearly plane, umbilicate, glabrous, hygrophanous, brown and striatulate on the margin when moist, whitish or pale gray when dry; lamellae subdistant, sometimes branched, decurrent, brownish, interspaces venose; stem nearly equal, solid, glabrous, rather firm, paler than the pileus, often with a minute white tomentum at the base; spores ellipsoid, 8 x 5 μ.

Pileus 4–10 mm broad; stem 12–20 mm long, 1–1.5 mm thick.

Among species of lichens (Peltigera). Albany and Oneida counties. May. Rare.

Sometimes two or three stems are united at the base, thus manifesting a tendency to become cespitose.

Clitocybe metachroa Fr.

CHANGEABLE CLITOCYBE

Sylloge V, p.185

Pileus thin, convex becoming plane or centrally depressed, glabrous, hygrophanous, brownish or grayish brown when young and moist, whitish when dry, margin slightly striate when old; lamellae thin, narrow, close, linear, adnate or slightly decurrent, whitish or cinerous; stem equal, tough, externally fibrous, stuffed or hollow, terete or compressed, whitish, mealy or pruinose at the top, colored like the pileus; spores 6–8 x 3–4 μ.

Pileus 2.5–4 cm broad; stem 3–4 cm long, 4–8 mm thick.

Pine woods. Albany co. November. Rare. Found but once.

The marked change of color between the moist pileus and the dry one is suggestive of the specific name. The mealy or pruinose top of the stem, its habitat in pine woods and its late appearance are guides in the identification of the species.

Clitocybe vilescens Pk.

WORTHLESS CLITOCYBE

N. Y. State Mus. Rep't 33, p.19

Pileus convex becoming plane or centrally depressed, sometimes irregular, glabrous, slightly pruinose on the involute margin, brown

or grayish brown, becoming paler with age, sometimes concentrically rivulose, flesh pale gray; lamellae close, adnate or decurrent, cinereous or tinged with dingy yellow; stem short, equal, solid, sometimes compressed, grayish brown with a whitish tomentum at the base; spores subglobose, 5–6 x 4–5 μ.

Pileus 2.5–4 cm broad; stem 2–5 cm long, 2–4 mm thick.

Gregarious. Bushy places and pastures. Albany and Onondaga counties. August. Not common.

Clitocybe angustissima Lasch

NARROW GILL CLITOCYBE

Sylloge V, p.188

Pileus slightly fleshy, plane or centrally depressed, glabrous, hygrophanous, watery white when moist, shining white when dry, the spreading margin slightly striate when old; lamellae thin, narrow, very close, white; stem slender, stuffed, often curved or flexuous, naked at the top, glabrous or pubescent at the base, white; spores 4–5 x 2–3 μ.

Pileus 4–5 cm broad; stem 3–5 cm long, 2–3 mm thick.

Low wet ground in woods. Essex co. September. Rare.

Related to Clitocybe fragrans Sow. from which it may be separated by the lack of odor, the more slender stem and the purer white color.

Clitocybe subditopoda Pk.

DITOPODALIKE CLITOCYBE

N. Y. State Mus. Rep't 42, p.18

Pileus thin, convex or nearly plane, umbilicate, glabrous, hygrophanous, grayish brown and striate on the margin when moist, paler when dry, flesh concolorous, odor and taste farinaceous; lamellae broad, close, adnate, whitish or pale cinereous; stem equal, glabrous, hollow, colored like the pileus; spores ellipsoid, 5–6 x 3–4 μ.

Pileus 12–24 mm broad; stem 2.5–5 cm long, about 2 mm thick.

Mossy ground in woods. Essex co. September. Rare.

This is closely related to Clitocybe ditopoda Fr. from which it may be separated by the umbilicate pileus, its striate margin and its broader paler lamellae.

Clitocybe compressipes Pk.

FLAT STEM CLITOCYBE

N. Y. State Mus. Rep't 33, p.18

Pileus thin, convex or nearly plane, umbilicate, glabrous, hygrophanous, brownish when moist, whitish or pale tan color when dry, flesh white when dry, odor slight, farinaceous; lamellae close, subarcuate or horizontal, adnate or slightly decurrent, whitish; stem firm, hollow, generally compressed, often slightly tapering upward, slightly pruinose, colored like the pileus; spores 5–6 x 4–4.5 μ.

Pileus 2–3 cm broad; stem 2–4 cm long, 2–4 mm thick.

Gregarious. In pastures or grassy places. Albany and Warren counties. July. Not common.

The odor is not always perceptible unless the pileus is moist or broken. The umbilicate pileus, paler or whitish lamellae, time and place of growth separate this species from Clitocybe ditopoda Fr.

Clitocybe fragrans Sow.

FRAGRANT CLITOCYBE

Sylloge V, p.188

Pileus thin, convex becoming plane or umbilicate or centrally depressed, glabrous, hygrophanous, watery white when moist, whitish when dry, odor strong, aniselike; lamellae close, slightly decurrent, 2 mm broad, distinct, white; stem equal, slightly flexuous, elastic, glabrous, stuffed or hollow, whitish; spores 6–7 x 3–4 μ.

Pileus 2–5 cm broad; stem 4–5 cm long, 4–6 mm thick.

Woods among mosses and fallen leaves. Lewis co. July. Rare.

NEW YORK SPECIES OF LACCARIA

Laccaria B. & Br.

Pileus convex becoming umbilicate or depressed, flesh thin; lamellae broadly adnate, sometimes with a decurrent tooth, becoming mealy with the copious subglobose minutely warted white spores; stem central, externally fibrous, veil not evident.

The species of this genus have generally been included in Clitocybe, but they are so peculiar in their general appearance that it seems best to separate them. The lamellae are rather thick and subdistant broadly adnate and when mature are powdered or whitish pruinose from the abundant spores. These are typically globose or nearly so and rough. We have included one species in this genus that has oblong even spores; but in all other respects it is so closely allied to the genus that it seems best to consider the spore character a specific rather than a generic one.

KEY TO THE SPECIES

Base of the stem radicating, clavately thickened.....trullisata
Base of the stem not radicating, rarely thickened.....1
1 Mature pileus usually more than 4 cm broad .....ochropurpurea
1 Mature pileus usually less than 4 cm broad 2
2 Lamellae violaceous .....amethystina
2 Lamellae flesh colored or nearly white.....3
3 Pileus regular, becoming unpolished or minutely squamulose.....laccata
3 Pileus regular, persistently glabrous .....striatula
3 Pileus irregular, usually less than 12 mm broad.....tortilis

Laccaria trullisata (Ellis) Pk.

PLASTERED LACCARIA

Sylloge V, p.195

Pileus fleshy, convex or plane becoming depressed in the center, innately fibrous, squamose or squamulose, smoother in the center, thin on the margin, reddish flesh color; lamellae unequal, subdistant, thick, adnate or with a decurrent tooth, at first purplish violet, then brick red and pruinose or white pulverulent; stem stuffed, fibrillose, colored like the pileus, the enlarged more or less deeply radicating and clavately thickened base covered by a mass of mycelium and adhering sand; spores oblong or cylindric, even, granular within, 15–20 x 8–9 μ.

Pileus 2.5–5 cm broad; stem 2.5–7 cm long, 5–8 mm thick.

Solitary or sparsely gregarious. Sandy soil. Suffolk, Nassau, Madison and Albany counties. September and October.

The author of this species placed it in Clitocybe with the remark that it is related to Agaricus laccatus Scop. and A. ochropurpureus Berk. The fresh mycelium is violet colored. The specific name apparently has reference to the mass of soil adhering to the base of the stem which in consequence appears as if it had been plastered over with sand.

Laccaria ochropurpurea (Berk.) Pk.

PURPLISH OCHER LACCARIA

N. Y. State Mus. Bul. 116, p.41, pl.106, fig.7–11

Pileus fleshy, firm, subhemispheric or convex with decurved margin becoming plane or slightly centrally depressed, hygrophanous, purplish brown when moist, grayish or pale alutaceous when dry, unpolished; lamellae thick, distant, broad, adnate or decurrent, purplish; stem variable, short or long, equal or sometimes thicker in the middle, sometimes at each end, fibrous, solid, colored like or paler than the pileus; spores globose, verruculose, 8–10 μ in diameter.

Pileus 5–10 cm broad; stem 3–8 cm long, 4–12 mm thick.

Solitary or rarely gregarious. Open grassy or bushy places. Common. July to September. Edible.

This species is often very irregular and very variable in size and shape. The color of the lamellae is generally darker than in Laccaria laccata (Scop.) B. & Br. The pileus is much darker when moist than when dry. The stem is very fibrous and firm.

Laccaria amethystina (Bolt.) B. & Br. in part

AMETHYST LACCARIA

N. Y. State Mus. Rep't 48, p.176, pl.25, fig.23–27

Pileus thin, broadly convex, umbilicate or centrally depressed, hygrophanous, brown or violaceous brown when moist, grayish when dry, unpolished; lamellae subdistant, adnate or decurrent, violaceous, color more persistent than in the pileus; stem slender, equal, flexuous, hollow, colored like or paler than the pileus; spores globose, verruculose, 8–10 μ in diameter.

Pileus 1.2–2.5 cm broad; stem 2.5–5 cm long, 2–4 mm thick.

Solitary or gregarious. Damp ground in shaded places. Not common. Albany and Suffolk counties. July and August.

This beautiful and quite distinct species has commonly been confused with Laccaria laccata (Scop.) B. & Br. or considered a mere variety of it; but to me it appears to be distinct in its violaceous color, slender hollow stem, peculiar habitat, commonly smaller size and more rare occurrence. It is easily recognized and the change of color between the moist and the dry state is strongly marked.

Laccaria laccata (Scop.) B. & Br. in part

LACCATE LACCÀRIA WAXY CLITOCYBE

N. Y. State Mus. Rep't 48, p.175, pl.25, fig.1–13

Pileus fleshy, rather thin, convex or nearly plane, sometimes umbilicate or centrally depressed, hygrophanous, glabrous, furfuraceous or minutely squamulose, pale red, buff red or flesh red when moist, pale ochraceous, grayish or buff when dry, margin even; lamellae rather broad, thick, subdistant, adnate or decurrent, flesh color or pale flesh color; stem long or short, nearly or quite equal, fibrous, firm, straight or flexuous, stuffed, colored like the pileus; spores globose, verruculose, 8–10 μ in diameter.

Pileus 1.2–5 cm broad; stem 2.5–7.5 cm long, 2–6 mm thick.

Solitary, gregarious or cespitose. Woods, groves, swamps, mossy places and pastures in wet, dry or sandy soil and even in sphagnum. Common. May to October. Edible.

This is the most common and the most variable species of the genus. It is not at all particular concerning its habitat, soil nor season. It may be found at any time from spring to late autumn if the weather is not too dry. As in other species the color of the lamellae is more persistent than that of the pileus, and is one of the most available characters by which to separate this species from any of the preceding.

On account of its variability many varieties have been designated by European mycologists. We recognize among our specimens only two varieties: var. pallidifolia Pk. (N. Y. State Mus. Rep't 48, p.176, pl.25, fig.19–22) differing from the type in having the lamellae very pale, barely tinged with flesh color; and var. decurrens Pk. in which the lamellae are distinctly decurrent or arcuate decurrent. As an edible species it is not to be classed as first quality. It is inclined to be tough and not highly flavored.

Laccaria striatula (Pk.)

STRIATULATE LACCARIA

N. Y. State Mus. Rep't 48, p.176, pl.25, fig.14–18

Pileus very thin, submembranaceous, convex or nearly plane, glabrous, hygrophanous, buff red and striatulate when moist, grayish or pale buff when dry; lamellae broad, distant, adnate, pale flesh color; stem slender, equal, fibrous, hollow, colored like the pileus; spores globose or subglobose, verruculose, 11–13 μ in diameter.

Pileus 12–20 mm broad; stem 1.5–3 cm long, 1–2 mm thick.

Gregarious. In wet or damp places. Albany, Ulster and Warren counties. Not common. June to September.

This was formerly considered a mere variety of Laccaria laccata (Scop.) B. & Br., but its thinner glabrous striatulate pileus, which is usually convex, its smaller size, more slender hollow stem and specially its larger spores lead me to consider it a distinct species.

Laccaria tortilis (Bolt.) B. & Br.

TWISTED LACCARIA

Sylloge V, p.198

Pileus membranaceous, convex plane or centrally depressed, deflexed and sometimes torn on the margin, obscurely striate, irregular, subferruginous; lamellae thick, subdistant, adnate, flesh color; stem short, equal or slightly thickened at the base, stuffed or hollow, twisted, fragile, colored like the pileus; spores globose, echinulate, 12–16 μ in diameter.

Pileus 5–10 cm broad; stem 8–12 mm long, .5–1 mm thick.

Closely gregarious or cespitose. Damp places in woods or by roadsides. Rensselaer and New York counties. August. Rare.

This is the smallest of our species. It is easily recognized by its small size and irregular shape. Its spores are larger and more sharply verruculose than in the preceding species. Var. gracilis Pk. has a more regular pileus, a longer stem and a less cespitose mode of growth.

NEW YORK SPECIES OF PSILOCYBE

Psilocybe Fr.

Pileus more or less fleshy, glabrous, the margin at first incurved; lamellae brown or purplish brown, not decurrent; stem subcartilaginous, rigid or tenacious, tubular, either hollow or stuffed, often radicating; veil absent or rudimentary, not forming a membrane; spores either brown or purplish brown.

The genus has been divided into two sections characterized as follows:

Rigidae. Pileus thin, not pelliculose, hygrophanous, commonly some shade of brown and striatulate when moist, paler when dry; stem slender, rigid, usually brittle or fragile, glabrous or silky fibrillose, veil none.

Spadiceae is another name that has been applied to this section.

Tenaces. Pileus pelliculose, often slightly viscid in wet weather, becoming pale and mostly clear or bright in color; stem commonly tough flexible, glabrous or silky fibrillose, veil rarely conspicuous.

Callosae is another name sometimes applied to this section.

The species of these sections are not in all cases sharply separated from each other. We have included in the genus one species having red spores.

The absence of an interwoven veil will distinguish species of Psilocybe from those of Hypholoma on one hand, and the incurved margin of the young pileus will separate them from those of Psathyra on the other. Most of the species are terrestrial but a few small ones inhabit wood or fallen decaying leaves. Some occur both on wood and on the ground.

KEY TO THE SPECIES

Pileus hygrophanous 1
Pileus not hygrophanous 14
1 Stem tinged with blue ..... caerulipes
1 Stem not tinged with blue 2
2 Plant growing in sandy soil ..... arenulina
2 Plant not growing in sandy soil 3
3 Pileus rugose plicate and atomate ..... atomatoides
3 Pileus not having these characters 4
4 Spores red ..... conissans
4 Spores brown or purplish brown 5
5 Moist pileus yellow, reddish yellow or brownish 6
5 Moist pileus alutaceous, reddish brown or chestnut 7
5 Moist pileus brown, sooty brown or blackish brown 10

6 Stem reddish brown .....squalidella
6 Stem white .....polycephala
7 Plant growing in woods or uncultivated places 8
7 Plant growing in grassy places .....foenisecii
8 Spores globose or subglobose .....phyllogena
8 Spores ellipsoid 9
9 Pileus less than 2.5 cm broad .....castanella
9 Pileus 2.5 cm or more broad, bay brown when moist .....spadicea
9 Pileus 2.5 cm or more broad, tan color when moist .....fuscofolia
10 Moist pileus striatulate on the margin 11
10 Moist pileus not striatulate on the margin .....nigrella
11 Plant growing on decaying wood 12
11 Plant growing on mud or wet ground .....limicola
11 Plant growing in sphagnum .....fuscofulva
12 Young lamellae whitish .....camptopoda
12 Young lamellae brown or cinereous 13
13 Stem brownish, less than 2.5 cm long .....unicolor
13 Stem white, more than 2.5 cm long .....senex
14 Stem white or whitish 15
14 Stem some other color 17
15 Pileus viscid when moist .....semilanceata
15 Pileus not viscid when moist 16
16 Pileus striate on the margin .....clivensis
16 Pileus even on the margin .....limophila
17 Pileus striatulate on the margin .....dichroa
17 Pileus not striatulate on the margin 18
18 Pileus yellowish when moist .....elongatipes
18 Pileus tawny bay when moist .....uda

Psilocybe caerulipes Pk.

BLUE STEM PSILOCYBE

N. Y. State Mus. Rep't 38, p.89

Pileus thin, subcampanulate becoming convex, obtuse or obtusely umbonate, glabrous, hygrophanous, slightly viscid, brown and striatulate on the margin when moist, yellowish or subochraceous when dry, the center sometimes brownish; lamellae at first ascending, close, adnate, grayish tawny becoming rusty brown, whitish on the edge; stem slender, equal, flexuous, tenacious, hollow or containing a separable pith, slightly fibrillose, pruinose at the top, bluish, sometimes whitish at the top; spores 8–10 x 4–5 μ.

Pileus 10–20 mm broad; stem 2.5–4 cm long, 1–1.5 mm thick.

Cespitose or solitary. On decaying wood. Saratoga co. August. ✗ Rare.

The species may readily be recognized by its bluish stem. The pileus sometimes changes to blue where bruised. The spores are

smaller than those of Psilocybe semilanceata caerulescens Cke. which has the stem slightly bluish at the base.

Psilocybe arenulina Pk.

SANDY PSILOCYBE

N. Y. State Mus. Rep't 30, p.42

Pileus convex becoming plane or centrally depressed, rarely umbonate, glabrous, hygrophanous, dark brown and coarsely striate on the margin when moist, dingy white or whitish when dry; lamellae close, adnate, cinnamon brown becoming darker or purplish brown; stem slightly tapering upward, hollow, often radicating and somewhat clavate at the base, whitish; spores ellipsoid, 10–12 x 5–6 μ.

Pileus 1–3 cm broad; stem 3–5 cm long, 1.5–2 mm thick.

Gregarious. Sandy soil. Albany co. September and October. Rare.

When moist the pileus has a peculiar radiate appearance as if distinctly striate. Large plants often have the margin of the pileus uneven or wavy and widely sulcate and irregularly striate. A mass of sand usually adheres to the base of the stem. This species is apparently closely related to the European Psilocybe ammophila Mont. from which it may be separated by its hygrophanous pileus which is commonly depressed in the center, rarely umbonate and constantly coarsely striate or sulcately striate both when moist and when dry. Its lamellae also differ, if we may rely upon the descriptions of the lamellae of that species, in having at first a cinnamon brown color which becomes dark purplish brown with age. They are not made "black pulverulent" by the spores as in P. ammophila Mont. For these reasons it seems to me far better to consider our plant distinct from the European species.

Psilocybe atomatoides Pk.

ATOMATE PSILOCYBE

N. Y. State Mus. Rep't 29, p.41

Pileus thin, fragile, convex or subcampanulate becoming nearly plane, rugosely wrinkled, atomate, slightly and evanescently white floccose, slightly hygrophanous, grayish or ochraceous brown, sometimes with a pinkish tint, flesh cinereous; lamellae moderately broad, subventricose, rounded behind, adnexed, cinereous becoming dark brown; stem equal, hollow, minutely flocculent when young, pruinose at the top, whitish; spores blackish brown, 7–8 x 4–5 μ.

Pileus 1.6–2.4 mm broad; stem 3–5 cm long, 2 mm thick.

Ground and decaying wood under pine trees. Albany co. June and July. Rare.

In wet weather the pileus has a moist brownish appearance, but its moisture escapes quickly. The spore print on white paper is almost black, but the spores are much smaller than those of Psathyrella atomata Fr. It also approaches Hypholoma incertum Pk. in general appearance but differs in the color and character of the lamellae.

Psilocybe conissans Pk.

DUSTY PSILOCYBE

N. Y. State Mus. Bul. 122, p.131

N. Y. State Mus. Rep't 41, p.64; 42, p.45 as Clitopilus conissans Pk.

Pileus fleshy but thin, broadly convex becoming nearly plane, glabrous, hygrophanous, pale chestnut or ferruginous and striatulate on the margin when moist, pale alutaceous or pale buff and sometimes slightly rugose when dry, flesh whitish; lamellae thin, close, rounded behind, adnexed or rarely adnate, bay verging to dark purple or liver color; stem equal, rather slender, firm, glabrous, hollow, curved or flexuous, white, veil none; spores red or vinaceous, 8–10 x 4–5 μ.

Pileus 2.5–5 cm broad; stem 2.5–5 cm long, 2–4 mm thick.

Cespitose. On or about the base of deciduous trees. Ulster, Essex and Saratoga counties. September and October. Not common.

Remarkable for and easily distinguished from all other species of this genus by the color of the spores. By reason of their color the species was formerly referred to the genus Clitopilus. But their color is darker than pink and paler than purplish brown. Its other characters indicate Psilocybe as its proper genus.

Psilocybe squalidella Pk.

SQUALID PSILOCYBE

N. Y. State Mus. Rep't 29, p.40 as Agaricus (Hypholoma) squalidellus Pk.

Pileus thin, convex, subconic or subcampanulate, expanded when old, glabrous, hygrophanous, dark ochraceous and striatulate on the margin when moist, pale ochraceous or yellow when dry, spore stained and squalid when old; lamellae broad, subdistant, rounded behind, adnexed, whitish becoming purplish brown with a whitish

edge; stem slender, stuffed, fibrous, subflexuous, reddish brown; spores 9–12 x 5–8 μ.

Pileus 1.2–2.4 cm broad; stem 2.5–5 cm long, 2–2.5 mm thick.

Gregarious or cespitose. Damp ground in woods. Adirondack mountains. September. Very variable. Rare except in the Adirondack region.

Var. umbonata Pk. has the pileus umbonate.

Var. macrospora Pk. has spores 12–15 x 6–8 μ.

Var. deformata Pk. has the pileus very irregular with the margin upcurved and the lamellae very broad, ventricose and irregular; spores 12–15 x 6–8 μ.

Perhaps the last two may be worthy of specific distinction. An unattractive species with the pileus often stained and defiled by the spores lodging on it.

Psilocybe polycephala (Paul.)

MANY CAP PSILOCYBE

Plate 127, fig.1–9

Pileus fleshy but thin, subcampanulate convex or nearly plane. glabrous, even, hygrophanous, at first whitish with a reddish yellow center, then darker or brown and striatulate on the margin while moist, paler or whitish when dry, taste mild; lamellae thin, narrow, close, adnexed or nearly free, whitish becoming purplish brown; stem equal, straight or flexuous, hollow, glabrous, mealy or pruinose at the top, white; spores purplish brown, ellipsoid, 7–8 x 4–5 μ.

Pileus 1–3 cm broad; stem 2.5–5 cm long, 2–4 mm thick.

Densely gregarious or cespitose. In woods on the ground about the base of trees or on dead wood. Lewis co. September. Rare. Edible.

This is commonly considered a variety of Psilocybe spadicea Fr. but it has seemed to us to be worthy of specific distinction. Its distinctive features have been mentioned in another place in this report.

Psilocybe foeniseeii (Pers.) Fr.

HAYMAKERS PSILOCYBE MOWERS MUSHROOM

N. Y. State Mus. Bul. 75. p.33, pl.86, fig.1–11

Pileus thin, campanulate or convex, obtuse, glabrous, hygrophanous, brown or reddish brown when moist, paler when dry; lamellae broad, ventricose, adnate, subdistant, brown; stem slender,

nearly straight, rigid, fragile, hollow, glabrous, pruinose at the top, pallid or rufescent; spores brown, ovoid or unequally ellipsoid, obscurely and bluntly apiculate at one end, 12–16 x 8–10 μ (10–12 x 6–7 μ in Syiloge).

Pileus 1.2–2.4 cm broad; stem 5–7 cm long, 1.5–2 mm thick.

Gregarious. Lawns and rich soil in grassy places. Albany co. May and June. Edible.

The spores in our plant are a little larger than the dimensions attributed to those of the European plant, but we have not considered this difference of sufficient weight to justify the separation of our plant as a distinct species. Sometimes the moist pileus shows striatulations on the margin but this character is not constant. The moisture escapes from the center of the pileus sooner than from the margin. This is according to the usual habit of hygrophanous species.

Psilocybe phyllogena Pk.

LEAF PSILOCYBE

N. Y. State Mus. Rep't 26, p.60 as Agaricus (Hypholoma) phyllogenus Pk.

Pileus thin, firm, convex, sometimes slightly umbonate, hygrophanous, reddish brown when moist, alutaceous when dry; lamellae plane, broad, close, brown, white on the margin; stem equal, fibrillose, stuffed or hollow, brownish, expanding at the base into a thin flat disk which adheres closely to the leaf on which it grows; spores pale brown, subglobose, 6–8 μ in diameter.

Pileus 4–8 mm broad; stem 1.5–2.5 cm long, 1–2 mm thick.

Fallen leaves in woods. Otsego co. July.

One of our smallest species. Because of the absence of a veil it belongs to the genus Psilocybe rather than to Hypholoma to which it was originally referred. The closely related Hypholoma modestum Pk. is probably only a form of this species, from which it differs slightly in its larger size, its grayish young lamellae and its inhabiting sticks and twigs instead of leaves. It may be designated Psilocybe phyllogena modesta Pk.

Psilocybe castanella Pk.

CHESTNUT PSILOCYBE

N. Y. State Mus. Bul. 2, p.7

Pileus thin, convex or subconic becoming plane or slightly depressed in the center, glabrous, hygrophanous, chestnut or umber

brown and striatulate on the margin when moist, pale alutaceous when dry, flesh paler than the surface of the pileus; lamellae close, adnate or slightly rounded behind, pale brown becoming purplish brown; stem equal, flexuous, hollow or stuffed with a whitish pith, slightly silky fibrillose, brownish or subrufescent with a white mycelium at the base; spores ellipsoid, purplish brown, 8–10 x 4–5 μ.

Pileus 8–16 mm broad; stem 2.5–5 cm long, 1–2 mm thick.

Gregarious or subcespitose. Grassy ground by roadsides. Rensselaer co. June. Rare.

In drying, the moisture first disappears from the center of the pileus. The young pileus and its margin, as well as the stem, are sometimes adorned with a few white fibrils.

Psilocybe spadicea Fr.

BAY PSILOCYBE

Sylloge V, p.1052

Pileus fleshy, rigid, convex becoming nearly plane, obtuse, scabrous, even, hygrophanous, bay or bay brown when moist, pallid when dry; lamellae close, rounded behind, adnexed, dry, whitish becoming pinkish brown; stem equal, rather tough, glabrous, hollow, even at the top, whitish; spores brown, 8–9 x 4–5 μ.

Pileus 2.5–6 cm broad; stem 5–8 cm long, 4–6 mm thick.

Commonly cespitose. Ground in woods, among fallen leaves or on and about the base of trees. Cattaraugus co. September.

Psilocybe fuscofolia n. sp.

BROWN GILL PSILOCYBE

Pileus fleshy, thin, conic or hemispheric, becoming convex plane or centrally depressed, glabrous, even on the margin, hygrophanous, alutaceous when moist, subochraceous and rugose when dry, flesh whitish or yellowish; lamellae narrow, thin, close, adnate, sometimes forked, pale brown becoming reddish brown; stem equal, slender, hollow, silky fibrillose, white, thickened or subbulbous at the base, there covered with a white mycelioid tomentum; spores brown, ellipsoid, 6–8 x 3–4 μ.

Pileus 2.5–5 cm broad; stem 2.5–4 cm long, 2–4 mm thick.

Solitary, gregarious or cespitose. On or about stumps, on the ground, decaying wood and in crevices of rocks in woods or in open places. New York and Richmond counties. October and November. Common.

This species is well marked by having its pileus rugose when dry and its lamellae brown from the first. Its somewhat bulbous stem, firmly attached to its place of growth by its white basal tomentum is also a noticeable character. Its brown spores, the incurved margin of the pileus and the entire absence of a veil plainly indicate the genus to which this peculiar species belongs.

Psilocybe nigrella Pk.

BLACKISH PSILOCYBE

N. Y. State Mus. Bul. 139, p.28, pl.111, fig.7–11

Pileus thin, broadly convex becoming nearly plane, slightly umbonate, hygrophanous, seal brown, shining and even or obscurely striate on the margin when moist, raw umber or mummy brown when dry; lamellae thin, rather close, rounded behind, adnexed, purplish brown or seal brown, whitish on the edge; stem firm, rigid, equal, stuffed with a slender white pith, silky fibrillose, whitish; spores dark purplish brown, almost black, ellipsoid, 10–12 x 6–8 μ.

Pileus 2.5–4 cm broad; stem 3.5–7 cm long, 2.4 mm thick.

Scattered or gregarious. Damp mossy ground in swamps. Albany co. October. Rare. Found but once.

Psilocybe limicola Pk.

MUD PSILOCYBE

N. Y. State Mus. Rep't 24, p.70, pl.2, fig.9–13

Pileus thin, convex becoming nearly plane, glabrous, hygrophanous, dark brown and striatulate on the margin when moist, pale ochraceous brown and rugosely wrinkled when dry; lamellae close, rounded behind, adnexed, cinnamon brown, darker when old; stem slender, equal, brittle, silky, hollow above, stuffed with a pith below, whitish; spores ellipsoid, 10–12 x 6–8 μ.

Pileus 1.2–5 cm broad; stem 3–8 cm long, 1.5–3 mm thick.

Gregarious or cespitose. Damp muck soil in woods. Lewis and Franklin counties. September.

Psilocybe fuscofulva Pk.

TAWNY BROWN PSILOCYBE

N. Y. State Mus. Bul. 2, p.7

Pileus thin, convex or subcampanulate, subumbonate, glabrous, hygrophanous, dark brown and striatulate on the margin when moist, subochraceous when dry; lamellae rather broad, moderately

close, adnate, subventricose, purplish brown; stem slender, flexuous, stuffed, slightly silky, reddish brown; spores purplish brown, 10–12 x 6–8 μ.

Pileus 1.2–2.5 cm broad; stem 3–5 cm long, 2–4 mm thick.

Solitary or scattered. In sphagnum. Albany co. October. Rare.

Psilocybe camptopoda Pk.

BENT STEM PSILOCYBE

N. Y. State Mus. Rep't 31, p.35

Pileus thin, broadly convex, glabrous, hygrophanous, brown and striatulate on the margin when moist, whitish when dry; lamellae narrow, close, adnate, whitish becoming brown; stem equal, curved or flexuous, solid, slightly pruinose or mealy at the top, with a white strigose mycelium at the base; spores 6 x 4 μ.

Pileus 5–20 mm broad; stem about 2.5 cm long, 1 mm thick.

Gregarious or solitary. On decorticated decaying prostrate trunks of trees in woods. Albany, Ulster and Wayne counties. September and October.

This is one of our smallest species.

Psilocybe unicolor Pk.

ONE-COLORED PSILOCYBE

N. Y. State Mus. Rep't 53, p.845

Pileus thin, broadly convex, hygrophanous, brown and striatulate on the margin when moist, even and pale brown or whitish when dry, flesh white, taste slightly disagreeable; lamellae narrow, thin, close, adnexed, brownish, becoming darker brown; stem short, straight or curved, equal, glabrous, stuffed or hollow, brownish, paler than the pileus; spores 6 x 4 μ.

Pileus 12–20 mm broad; stem 16–24 mm long, 2 mm thick.

Decaying prostrate mossy trunks in woods. Wayne co. October.

Growing in the same locality as Psilocybe camptopoda Pk. and closely related to it, but separated from it by its adnexed and darker colored lamellae and by its hollow, glabrous stem without a white strigose mycelium at the base.

Psilocybe senex Pk.

OLD PSILOCYBE

N. Y. State Mus. Rep't 41, p.70

Pileus thin, hemispheric, obtuse, hygrophanous, dark brown and striatulate on the margin when moist, pale cinereous and shining

when dry, slightly squamulose with superficial subfasciculate whitish fibrils, the margin sometimes appearing slightly and fugaciously appendiculate with these fibrils; lamellae broad, subdistant, adnate, grayish or cinereous, becoming brown or blackish brown, white on the edge; stem slender, hollow, fragile, floccosely pruinose, white; spores brown, 8 x 5 μ.

Pileus 1.2–2 cm broad; stem 3–7 cm long, 2 mm thick.

Decaying wood in woods. Ulster co. September. Rare.

The superficial fibrillose and evanescent squamules of the pileus are similar to those on the pileus of Psilocybe canofaciens Cke. but the white stem of our plant at once distinguishes it from that species. The specific name has reference to the white fibrils of the pileus which suggest the white hairs of old age.

Psilocybe semilanceata Fr.

LIBERTY CAP PSILOCYBE

Sylloge V, p.1051

Pileus thin, acutely conic or convex, obtuse or sometimes umbonate or cuspidate, viscid and striatulate on the margin when moist, pale yellow or pallid when dry, the margin incurved; lamellae subdistant, adnate, brown becoming purplish brown; stem equal, tough, stuffed, flexuous, shining, whitish or pallid; spores 12–16 x 8–10 μ.

Pileus 1.2–2 cm broad; stem 5–7 cm long, 2–3 mm thick.

Gregarious. Pastures and rich grassy places. Autumn. Albany co. Rare.

Very variable in the shape of the pileus, ranging from acutely conic to broadly convex and from obtuse to almost cuspidate. It is classed as poisonous by M. C. Cooke.

Psilocybe clivensis B. & Br.

HILLY PSILOCYBE

Sylloge V, p.1055

Pileus thin, convex or hemispheric, even, atomate, pale brown or pale ochraceous, rarely almost white, striate on the margin; lamellae widely sinuate, adnexed, subdistant, brown; stem equal, hollow, silky above, white or whitish; spores 8–10 x 4–5 μ.

Pileus 1–2 cm broad; stem 3–7 cm long, 1.5–2 mm thick.

On the ground or on decaying wood lying on the ground. Ulster co. September. Rare. Found but once.

Psilocybe limophila Pk.

MUD-LOVING PSILOCYBE

N. Y. State Mus. Rep't 30, p.42

Pileus thin, convex becoming nearly plane, fragile, atomaceous, radiately rugulose, whitish, often splitting on the margin, sometimes areolately cracking; lamellae rather broad, subdistant, whitish becoming purplish brown; stem equal, striate and slightly mealy at the top, hollow, short, white; spores 10–12 x 5–6 μ.

Pileus 1.4–2.5 cm broad; stem 2–2.5 cm long, 1.5–2 mm thick.

Muddy alluvial soil under willows. Albany co. September. Rare.

Similar to Hypholoma incertum Pk. in color, but it differs in the absence of a veil and of the hygrophanous character of the pileus, the more distant lamellae and the larger spores.

Psilocybe dichroa (Pers.) Karst.

TWO-COLORED PSILOCYBE

Sylloge V, p.1045

Pileus thin, fleshy, conic or campanulate becoming convex, subumbonate, glabrous, subviscid, subshining, striatulate on the margin, brown or bay brown, subalutaceous in dry weather; lamellae broad, subclose, adnexed, ventricose, pallid, then purplish brown, whitish on the edge; stem equal or slightly thickened downward, hollow, silky, pallid becoming brownish; spores 10 x 5 μ.

Pileus 2.5–3.5 cm broad; stem 5–7 cm long, 2–4 mm thick.

Marshes and wet places. Albany co. October. Rare. Found but once.

Psilocybe elongatipes Pk.

LONG STEM PSILOCYBE

N. Y. State Mus. Rep't 29, p.40

Pileus thin, convex becoming nearly plane, glabrous, moist, yellow; lamellae broad, subdistant, ventricose, yellowish becoming brown, usually whitish on the edge; stem elongated, fragile, flexuous, stuffed or hollow, slightly silky fibrillose, pallid or reddish; spores ellipsoid, 10–12 x 6–8 μ.

Pileus 1.2–2.5 cm broad; stem 7–12 cm long, 1.5–2 mm thick.

Gregarious. Among sphagnum in marshes and wet places. Lewis co. September. Rare.

A sterile form sometimes occurs in which the lamellae are persistently pale or yellowish. In young plants slight vestiges of a veil sometimes are visible.

Psilocybe uda (Pers.) Fr.

MOIST PSILOCYBE

Sylloge V, p.1045

Pileus fleshy, thin, convex becoming plane, rugulose when dry, tawny bay becoming yellowish; lamellae subdistant, adnexed, ventricose, whitish becoming purplish brown; stem equal, elongated, thin, tough, fibrillose, hollow, straight or slightly wavy, pale above, ferruginous below; spores purplish brown, 16–20 x 7–9 μ.

Pileus 2–3 cm broad; stem 5–8 cm long, 2–3 mm thick.

Gregarious. In swamps among sphagnum and other mosses. Albany and Oswego counties. September and October.

The spore dimensions here given are taken from American specimens and agree with those given in Sylloge. Some English authors give much smaller dimensions, 10 x 5 μ.

Var. elongata (Pers.) Sacc. has the pileus striate on the margin when moist, even when dry. The color of the moist pileus is livid or greenish yellow, of the dry pileus pale yellowish. Gregarious. Among sphagnum. July to September. Albany and Fulton counties.

Psilocybe cernua Vahl has been reported but its identity is not well established and it is therefore omitted.

LATIN DESCRIPTIONS OF NEW SPECIES AND VARIETIES

Agaricus campester majusculus

Pileus carnosus, firmus, convexus vel subplanus, margine fibrillosus squamosusve, disco levis, lamellas excedens, umbrinus, carne alba, leviter tardeque rufescente caesa, sapore miti, dulce; lamellae tenues, confertae, liberae, incarnatae, demum atrobrunneae; stipes validus, aequalis, farctus, fibrillosus, albus, annulo albo; sporae late ellipsoideae, 7–9 x 6–7 μ.

Pileus 6–15 cm latus; stipes 2.5–7 cm longus, 1–2 cm crassus.

Ascochyta imperfecta

Maculae variabiles, 4–12 mm latae, amphigenae, orbiculares semiorbiculares subtriangularesve, majores vulgo terminales vel marginales, pallide brunneae vel fumosobrunneae, indefinite limitatae; perithecia pauca, amphigena, depressa, .3–.6 mm lata, brunnea vel nigrobrunnea; sporae variabiles, continuae vel pseudouniseptatae, oblongae subcylindraceaeve, utrinque obtusae, aliquando ad septum constrictae, hyalinae, 6–15 x 2.5–4 μ.

Boletus albidipes

Pileus carnosus, convexus deinde late convexus subplanusve, viscidus vel glutinosus, juvenis flavidoalbus, deinde subochraceus obscureque maculatus, carne alba; tubuli plani, adnati, albidi, deinde lutei, tandem subochracei, dissepimentis nudis vel glandularibus punctis paucis; stipes brevis, aequalis, solidus, albus, nudus vel punctis glandularibus paucis ad apicem; sporae 8–10 x 3–4 μ.

Pileus 5–8 cm latus; stipes 2.5–5 cm longus, 8–12 mm crassus.

Boletus ballouii

Pileus carnosus, firmus, saepe irregularis, convexus, subplanus vel in centro leviter depressus, siccus, impolitus vel minute tomentosus, primus aurantiacus, deinde brunneo-aurantiacus, brunneus vel subcinnamomeus, carne alba, sapore miti; tubuli albi albidive, deinde brunnescentes vel brunnei, ubi contusi fumoso brunnei, adnexi subdecurrentesve; stipes variabilis, solidus, farinosus vel minute furfuraceus, ad apicem striatus subreticulatusve, luteus aurantiacusve, saepe albidus in parte supera; sporae 8–10 x 4–5 μ.

Pileus 5–12 cm latus; stipes 2.5–12 cm longus, 7–15 mm crassus.

Camarosporium maclurae

Perithecia gregaria, .3 mm lata, in cortice nidulantia, erumpentia, conica vel subglobosa, vix papillata, atra; sporae primum continuae, hyalinae, deinde fuscae, 3–5-septatae, muriformes, saepe leviter curvatae, 15–20 x 8–10 μ.

In ramis emortuis Maclurae pomiferae (Raf.) Schneid.

Cercospora eustomae

Maculae suborbiculares, definitae, griseae vel griseobrunneae, linea angusta cinctae; hyphae caespitosae, in maculis dense aggregatae vel areas magnas foliorum vivorum occupantes, continuae seu septatae, irregulares et ad apicem nodulosae, 30–60 x 4–6 μ; sporae variabillissimae, rectae curvae flexuosaeve, oblongae vel subcylindraceae, irregulares, continuae vel obscure 1–2-septatae, subhyalinae, 20–60 x 4–6 μ.

Foliis vivis Eustomae andrewsii A. Nels. et E. russelliani (L.) Griseb.

Cercospora pastinaceae n. comb.

(Cercospora apii pastinaceae Sacc.)

Maculae parvae, inconspicuae, amphigenae, flavidovirides vel brunneae, venulis limitatae; hyphae hypophyllae, aseptatae, ad apicem nodulosae, pallidobrunneae, 40–60 x 6–8 μ; sporae oblongae vel cylindraceae, rectae vel curvae, ad apicem rare angustatae, 1–3-septatae, 25–85 x 6–8 μ, uniseptatae sporae loculo superiore angustiore.

In foliis vivis Pastinacae sativae L.

Cercosporella mirabilis

Maculae angulares, irregulares, 2–10 mm latae, interdum confluentes, primum lutescentes vel pallidae, deinde brunneorufescentes; hyphae longae, repentes, ramosae, intertextae vel breves, simplices et erectae, hypophyllae, hyalinae; sporae cylindraceae vel gradatim ad apicem angustatae, plurinucleatae, interdum 1–3-septatae, curvae vel flexuosae, ad apicem rare hamatae, hyalinae, 40–120 x 3–5 μ.

In foliis vivis Crataegi rivularis Nutt.

Cercosporella terminalis

Maculae anguste oblongae, 1–3 cm longae, 3–5 mm latae, saepe confluentes et ad apicem omnino folium discolorantes, brunneae vel

nigrobrunneae saepe steriles; caespites effusi, areas lineares floccu-lentes candidas formantes; sporae variabiles, curvae flexuosaeve, subcylindraceae vel ad apicem attenuatae, continuae vel 1–3-septatae, saepe nucleatae, 50–150 x 3–5 μ.

In foliis vivis Veratri viridis Ait.

Clitocybe fumosa brevipes

Stipes brevis, 1.2–2.5 cm longus, 1–2 cm crassus.

Clitocybe sinopicoides

Pileus tenuis, convexus, margine deflexus, umbilicatus, in centro floccososquamulosus, margine obscure fibrillosus, firmus, fulvorufus vel lateritius, carne alba, sapore odoreque farinaceis; lamellae sub-confertae, arcuatae, decurrentes, albae, venis leviter connexae; stipes aequalis, glaber vel subfloccosus, solidus vel farctus, sublateritius; sporae 6–8 x 3–4 μ.

Pileus 2–4 cm latus; stipes 2–4 cm longus, 2–4 mm crassus.

Inter muscos in locis uliginosis.

Clitocybe sudorifica

Pileus carnosus, tenuis, late convexus vel subplanus, saepe in centre depressus vel umbilicatus, irregularis vel in margine in lobos fissus, glaber, siccus, albidus vel griseo albus, carne alba, sapore miti; lamellae tenues, angustae, confertae, adnatae vel leviter de-currentes, albidae; stipes vulgo brevis, aequalis vel basi attenuatus, glaber pruinosusve, farctus vel cavus, interdum curvus, albus albidusve; sporae subglobosae, 4–5 x 3–4 μ.

Pileus 2–4 cm latus; stipes 1–3 cm longus, 2–4 mm crassus.

In locis gramineis.

Cortinarius albidipes

Pileus carnosus, compactus, hemisphaeric deinde late convexus, obtusus vel subumbonatus, viscidus, glaber, nitidus, luteolus, carne alba, sapore miti; lamellae 4–6 mm latae, subconfertae, pallide vio-laceae, demum cinnamomeae; stipes vulgo sursum attenuatus, basi incrassatus vel bulbosus, firmus, solidus, sericeo fibrillosus, albus; sporae subglobosus, 8–10 x 7–9 μ.

Pileus 5–10 cm latus; stipes 5–8 cm longus, 1–1.5 cm crassus.

Cortinarius phyllophilus

Pileus carnosus, crassus, compactus, convexus subplanusve, viscidus, subnitidus, leviter innate fibrillosus, pallide fulvo ochraceus, carne alba, sapore miti; lamellae tenues, confertae, acie erosae, luteae, deinde brunneo cinnamomeae; stipes brevis, validus, firmus, abrupte bulbosus, sericeo fibrillosus, albidus, basi subferruginosus; sporae utrinque subacutae, 10–12 x 5–6 μ.

Pileus 7–12 cm latus; stipes 3–5 cm longus, 1–1.5 cm crassus.

Coryneum sorbi

Acervuli numerosi, discoidei, erumpentes, orbiculares vel ellipsoidei, .5–1 mm lati, nigri; sporae oblongae vel oblongo ovoideae, triseptatae, saepe irregulares, fuscae, 12–20 x 8–9 μ; sporophores brevissimi vel obsoleti.

In ramulis emortuis Sorbi californicae Greene.

Dasyscypha sulphuricolor

Cupulae sulphureae, gregariae subcaespitosaeve, subsessiles, 1–3 mm latae, minute villosae; hymenium planum vel convexum, cupulae margine incurvo cinctum; asci subcylindracei, 70–80 x 3–4 μ; sporae oblongae vel subfusiformae, 10–12 x 2–3 μ; paraphyses filiformes.

In ligno emortuo Fraxini nigri Marsh.

Dermatea mori

Ascomata orbicularia ellipsoidea vel leviter irregularia, 1–2 mm lata, late convexa vel discoidea, erumpentia, epidermide rupta cincta, nigra vel brunneo nigra; asci cylindracei vel subclavati, 60–90 x 20–25 μ; sporae oblongae vel subcylindraceae, subdistichae, continuae, hyalinae, 20–30 x 8–10 μ.

In ramulis emortuis Mori albae tataricae Loud.

Diaporthe inornata

Pustulae valsoideae, 1–1.5 mm latae, in cortice interiore nidulantes; perithecia .3 mm lata, 4–14 in caespite, nigra, cum linea nulla circumscripta, ostiola longa, conferta discum perforantia et obliterantia, erumpentia, epidermide rupta cincta; asci subfusiformes, 60–80 x 8–10 μ; sporae conferta, oblongae vel subfusiformes, utrinque seta breve auctae, ad septum constrictae, 2–4-nucleatae, 15–24 x 3–4 μ.

In ramis emortuis Rhois typhinae L.

Diplodia polygonicola

Perithecia minuta, abundantia, dense gregaria, areas longas in stipitibus occupantia, erumpentia, atra; sporae oblongae vel subellipsoideae, primum hyalinae, deinde fuscae, postremo uniseptatae, 14–16 x 8–9 μ.

In stipitibus emortuis Polygoni lapathifolii L.

Entoloma subtruncatum

Pileus tenuis, subconicus, glaber, hygrophanus, humidus pallide ochraceus et margine striatulus, siccus pallidior et subnitidus, subtruncatus, subumbonatus vel leviter depressus, margine involutus; lamellae tenues, latae, adnexae, subconfertae, inaequales, albidae, demum pallide incarnatae; stipes gracilis, aequalis vel sursum leviter attenuatus, cavus, sericeo fibrillosus, flavus, basi albido tomentosus; sporae angulares, basi apiculatae, 12–14 x 8–10 μ.

Pileus 2–3 cm latus; stipes 3–8 cm longus, 2–5 mm crassus.

Flammula sulphurea

Pileus carnosus, subconicus vel convexus, deinde late convexus, glaber, viscidus, hygrophanus, humidus luteus, siccus sulphureus, interdum in margine squamis albidis fibrillosis ornatus, carne alba, sapore odoreque ingratis; lamellae tenues, confertae, arcuatae, adnatae margine crenulatae, albidae deinde ferruginosae; stipes aequalis, flexuosus, fibrillosus vel squamulosus, farctus vel cavus, ad apicem flavidus et nudus, deorsum ferrugineus; sporae fusco ferrugineae, 8–11 x 5–6 μ.

Pileus 2–6 cm latus; stipes 3–6 cm longus, 4–8 mm crassus.

In pomariis et sub Pyro malo L.

Gloeosporium psoraleae

Acervuli minuti, maculas orbiculares brunneas vel nigrescentes brunneas occupantes, .25–.75 mm lati; foliorum pilis infra obscurati; sporae oblongae vel subellipsoideae, rectae vel leviter curvae, hyalinae, 14–20 x 4–5 μ.

In foliis vivis Psoraleae esculentae Pursh.

Graphyllium chloes junci

Sporae ad septa non constrictae; paraphyses obsoleti vel carentes.

In culmis Junci baltici Willd.

Helvella capucinoides

Ascoma tenue, lentum, submembranaceum, vulgo subbilobatum, uno lobo erecto, altero deflexo, margine nudo, libero, involuto, lobo inferiore stipitem circumdante, subter album, rugulosum; hymenium fuliginoso ochraceum, deinde brunneum vel ochraceo brunneum; stipes gracilis, firmus, aequalis, subteres, farctus vel cavus, pruinoso pubescens, candidus; asci cylindracei, 240–280 x 18–20 μ; sporae oblongae vel ellipsoideae, uniseriatae, uninucleatae, hyalinae, 20–28 x 12–16 μ; paraphyses filiformes, apicibus clavatis.

Ascoma .5–2.5 cm latum; stipes 2.5–7 cm longus, 2–4 mm crassus.

In terra in sylvis. A Helvella capucina Quel. in ascomatis forma margineque nuda differt.

Henningsinia caespitosa

Stromata subclavata, .5–1 cm alta, 3–4 mm lata ad partem superiorem, ad partem inferiorem abrupta augustata, caespitosa, ad apicem obtusa vel subumbonata, atra, interdum nitida; perithecia oblonga, 1 mm longa, in stromatis parte superiore erecta; substantia inferior stromatis albida; asci ovato clavati, 36–40 x 14–16 μ; sporae inordinate confertae, oblongae, continuae, fuscae, 10–12 x 6–7 μ.

In cortice Burserae gummiferae Jacq.

Hygrophorus recurvatus

Pileus carnosus, margine tenuis, convexus, deinde planus vel margine recurvo concavus, saepe margine laceratus, udus griseo brunneus et margine obscure striatulatus, siccus subalutaceus levisque, glaber, interdum centro brunnescens, carne alba; lamellae distantes, subventricosae, venis connexae, decurrentes, albidae; stipes aequalis, fragilis, farctus cavusve, fibrosus, subpruinosus, albus albidusve; sporae late ellipsoideae vel subglobose, 6–8 x 4–6 μ vel 6–7 μ latae.

Pileus 1.2–2.4 cm latus; stipes 2–4 cm longus, 2–4 mm crassus.

Hysterium cubense

Perithecia gregaria vel subcaespitosa, oblonga ellipsoidea recta curva vel rare flexuosa, primum erumpentia, demum superficialia, epidermide dilapsa, levia, 1–2 mm longa, .5 mm lata altaque, atra; asci cylindracei, 160–200 x 15–20 μ; sporae uniseriatae, oblongae ellipsoideaeve, triseptata, fuscae, 30–40 x 12–16 μ.

In ramis emortuis in terra.

Leptonia davisiana

Pileus tenuis, submembranaceus, convexus, deinde planus vel late depressus, fragilis, glaber, centro leviter squamulosus, siccus saepe late striatus, nigrescente brunneus; lamellae tenues, confertae, subventricosae, adnexae, albae, deinde incarnatae et pulverulentae; stipes gracilis, aequalis, glaber, farctus cavusve, pileo in colore similis; sporae angulares, uninucleatae, 10–12 x 8–10 μ.

Pileus 1–2.5 cm latus; stipes 1.5–3 cm longus, 1–2 mm crassus.

In locis gramineis.

Leptostromella scirpina

Perithecia epiphylla vel rare amphigena, suborbicularia vel oblonga, discoidea concavave, subsuperficialia, atra; sporae subbacillares, hyalinae, curvae, continuae, utrinque acutae, 20–25 x 2–3 μ.

In foliis emortuis Scirpi atrovirentis Muhl.

Lysurus borealis serotinus

Pars externa loborum receptaculi alba; lineae candidae ab basi stipitis radiantes, aequales in numero receptaculi lobis, plagasque lineares in superficia interna volvae formantes.

Macrophoma burserae

Perithecia minuta, 100–200 μ lata, epidermide tecta, gregaria vel aggregata et pustulas parvas inaequales leviter prominentes et saepe confluentes formantia, atra, intus alba; sporae ellipsoideae, subhyalinae, 16–20 x 10–12 μ.

In cortice Burserae gummiferae Jacq.

Macrophoma numerosa

Perithecia minuta, .3–.5 mm lata, dense gregaria, membranacea, in cortice nidulantia, erumpentia, atra, intus albida; sporae oblongae fusiformesve, continuae, interdum binucleatae, utrinque acutae, 12–20 x 3–4 μ; sporophores brevissimi vel obsoleti.

In ramulis emortius Robiniae pseudacaciae L.

Morchella conica serotina

Pileus conicus vel irregularis, apice subactus vel late rotundatus, interdum perforatus, saepe sterilis et brunnescens, costis acie albidis; stipes minute squamulosus. Serotina. October et November.

Mycena atroumbonata

Pileus tenuis, submembranaceus, convexus, deinde late convexus subplanusve, umbonatus, late striato plicatus, glaber, subhygrophanus, udus brunneus et nitidus, siccus griseo brunneus, umbone nigro; lamellae tenues, subconfertae, late sinuatae, dente decurrentes, albae, deinde fumoso brunneae; stipes gracilis, glaber, cavus, radicans, basi albo villosus, pileo in colore similis; sporae oblongae vel ellipsoideae, intus granulares, saepe binucleatae, 6–9 x 5–6 μ.

Pileus 1.2–3.2 cm latus; stipes 5–8 cm longus, 1–2 mm crassus.

Solitaria vel gregaria. In truncis prostratis emortius Tsugae canadensis Carr. in sylvis.

Naucoria arenaria

Pileus tenuis, convexus subplanusve, flavidus vel subaurantiacus margine pallidior; lamellae latae, inaequales, sinuatae, brunneo ferruginosae; stipes gracilis, rigidus, glaber, medulla alba farctus, pileo in colore similis, pseudobulbosus; sporae brunnescente ferruginosae, 15–20 x 10–12 μ.

Pileus .75–2 cm latus; stipes 2–3 cm longus, 1–2 mm crassus.

Ovularia avicularis

Maculae magnae, suborbiculares oblongaeve, brunneo rufae; hyphae amphigenae, erectae, caespites minutos confertos albidos formantes, 25–35 x 3–4 μ; sporae oblongae vel ellipsoideae, continuae, rare infra leviter angustatae, hyalinae, 12–20 x 6–8 μ.

In foliis vivis Polygoni avicularis L.

Paxillus microsporus

Pileus carnosus, tenuis, deinde subplanus, subglaber, albus, demum albidus, interdum in centro brunnescens, udus leviter viscidus, primum margine involutus, demum repandus levisque vel distante striatus, carne alba; lamellae tenues, angustae, confertae, primum adnatae, demum decurrentes, interdum basi furcatae vel leviter anastomosantes, flavescentes, mox lutescente umbrinae; stipes brevis, vulgo deorsum attenuatus, solidus farctusve, pileo in colore similis; sporae brunneo ochraceae, minutae, subglobose, 2–3 μ latae.

Pileus 1–6 cm latus; stipes 1–6 cm longus, 3–8 mm crassus.

Solitarius vel caespitosus. In terra subter Castaneae dentatae (Marsh.) Borkh.

Peniophora tenuissima

Tenuissima, late effusa, indeterminata, adnata, siccitate levis vel leviter rimosa, subpruinosa, albida; sporae ellipsoideae, 8 x 4 μ; cystidia subcylindracea vel conica elongata obtusa, 50–80 x 15–20 μ.

Phacidium lignicola

Perithecia subsuperficialia, circiter 1 mm lata, orbicularia vel late ellipsoidea, prominentia, rugosa, atra, laciniate aperientia, margine 3–5 dentibus ornata; hymenium nigricans; asci clavati, 60–80 x 10–12 μ; sporae confertae vel subdistichae, continuae, rectae vel leviter curvae, oblongae, interdum basi leviter attenuatae, hyalinae, 12–15 x 3.5–4 μ.

In ligno decorticato Populi tremuloidis Mx.

Pholiota rigidipes

Pileus carnosus, subtenuis, firmus, late convexus, leviter et late umbonatus, squamulis hirtis appressis brunnescentibus obscure squamulosus, flavidus vel luteolus, carne alba, sapore miti; lamellae tenues, sublatae, confertae, brunneo ferruginosae; stipes longus, rigidus, gracilis, saepe flexuosus, cavus, obscure fibrilloso squamulosus, infra annulum parvum saepe evanescentem pallidus, ad apicem albus et pruinosus; sporae ellipsoideae, 8–10 x 5–6 μ.

Pileus 5–8 cm latus; stipes 6–8 cm longus, 5–7 mm crassus.

Inter folia dilapsa in sylvis.

Phoma bacteriophila

Perithecia minuta, .2–.3 mm lata, primum epidermide tecta, deinde erumpentia, sparsa vel dense gregaria, interdum conferta et ramulum omnino obtegentia, atra; sporae obovatae vel ellipsoideae, hyalinae, 5–8 x 4–5 μ.

In maculis morbidis truncorum parvorum Pini strobi L. et in ramulis emortuis.

Phoma leprosa

Perithecia .3–.5 mm lata, depressa subglobosave, perforata, incrustatione albida tecta; sporae rectae, cylindraceae, hyalinae, 10–15 x 3–4 μ.

In pomis dilapsis Crataegi punctatae Jacq.

Phoma roystoneae

Perithecia minuta, circiter, .2 mm lata, amphigena, gregaria, abundantia, atra; sporae minutae, oblongae subcylindraceaeve, hyalinae, 5–8 x 1.5–2 μ, sporophoribus brevibus hyalinis suffultae.

In foliis Roystoniae regiae (HBK.) O. F. Cook.

Pluteus alveolatus eccentricus

Stipes brevis, 2.5–3.5 cm longus, 4–6 mm crassus, curvus, eccentricus; sporae pallide incarnatae, interdum luteo incarnatae, globosae vel subglobosae, minute asperae, 6–8 μ latae.

Psilocybe fuscofolia

Pileus carnosus, tenuis, conicus hemisphaericusve, deinde convexus planus vel in centro depressus, glaber, margine levis, hygrophanus, udus alutaceus, siccus subochraceus et rugosus, carne albida flavidave; lamellae tenues, angustae, adnatae, interdum furcatae, pallide brunneae, deinde rubescente brunneae; stipes aequalis, gracilis, cavus, sericeo fibrillosus, albus, basi subbulbosus, albo tomentosus; sporae brunneae, ellipsoideae, 6–8 x 3–4 μ.

Pileus 2.5–5 cm latus; stipes 2.5–4 cm longus, 2–4 mm crassus.

Septoria magnospora

Maculae parvae, 2–3 mm latae, pallidae albidaeve, margine rufo brunneae; perithecia minuta, .2–.25 mm lata, depressa, atra; sporae magnae, late filiformes vel subcylindraceae, curvae, continuae, hyalinae, interdum plurinucleatae, 45–80 x 3–4 μ.

In foliis vivis Pruni fremontii Wats.

Septoria mirabilissima

Perithecia minutissima, .1–.2 mm lata, sparsa, superficialia, atra; sporae filiformes, flexuosae curvaeve, continuae, hyalinae, 40–150 x 1.5–2 μ; sporophores graciles, 20 x 1 μ.

In cortice leviter discolorato et leve Pini strobi L.

Tricholoma equestre albipes

Stipes albus. In alteris typo similis.

Tricholoma planiceps

Pileus carnosus, tenuissimus, late convexus planusve, glaber, griseo brunneus vel flavo brunneus, margine acuto, minutissime albo flocculente, carne alba; lamellae tenues angustae, confertae, leviter sinuatae, albae albidaeve; stipes gracilis, aequalis, farctus cavusve,

pileo in colore similis vel pallidior; sporae late ellipsoideae, 7–8 x 5–6 μ.

Pileus 2–5 cm latus; stipes 4–6 cm longus, 4–6 mm crassus.

Sub arboribus Thujae occidentalis L.

Tricholoma subsaponaceum

Pileus carnosus, compactus, flexibilis, convexus subplanusve, glaber, albidus, cremeus vel pallidus, in centro fumoso brunneus vel alutaceus, interdum maculis parvis submarginalibus ornatus, carne alba, fracta tarde lutescente vel crocea, odore grato, aniseo, sapore farinaceo; lamellae latae, confertae, adnexae vel subliberae, albidae; stipes variabilis, aequalis, nunc apice, nunc basi incrassatus, interdum compressus, rare radicans, sericeo fibrillosus, solidus, deinde cavus, albidus; sporae late ellipsoideae vel subglobosae, 5–6 x 4–5 μ.

Pileus 6–14 cm latus; stipes 4–5 cm longus, 1.5–3 cm crassus.

Inter folia dilapsa in sylvis.

Tricholoma subsejunctum

Pileus carnosus, conicus convexusve, saepe irregularis vel margine repandus et lobatus, udus leviter viscidus, subnitidus, fibrilis nigris virgatus vel reticulate virgatus, nigrescente brunneus, vulgo margine flavidus vel virescente luteolus, carne alba, sapore farinaceo; lamellae tenues, confertae, adnexae, albae, saepe anterius lutescentes; stipes validus, aequalis, solidus, albus, interdum lutescens; sporae minutae, 5–6 x 4–5 μ.

Pileus 2.5–7 cm latus; stipes 3–5 cm longus, 6–12 mm crassus.

Inter muscos et folia dilapsa in sylvis.

Tricholoma terraeolens majus

Pileus 2–6 cm latus, vulgo umbonatus, subplanus vel circum umbonem depressus; stipes solidus, 6–10 cm longus, 4–6 mm crassus.

In alteris typo similis.

Vermicularia hysteriiformis

Perithecia ellipsoidea oblongave, .3–.6 mm longa, primum epidermide tecta, demum erumpentia, setosa, atra; setae erectae divergentesve, 50–120 x 4–5 μ, atrae, ad apicem subhyalinae, acutae; sporae oblongae vel subfusiformes, rectae vel leviter curvae, utrinque acutae, continuae, hylinae, 20–25 x 3–4 μ.

In caulibus emortuis Caulophylli thalictroidis (L.) Mx.

EXPLANATION OF PLATES

Plate 124

Tricholoma subsejunctum Pk.

SUBDISJOINED TRICHOLOMA

1 Two young plants
2 Plant with conic cap
3 Plant with convex cap and lobed margin
4 Vertical section of the upper part of a plant
5 Four spores x 400

Tricholoma equestre albipes Pk.

WHITE STEM EQUESTRIAN TRICHOLOMA

6 Plant with convex cap
7 Plant with fully expanded cap
8 Vertical section of the upper part of a plant
9 Four spores x 400

EDIBLE FUNGI

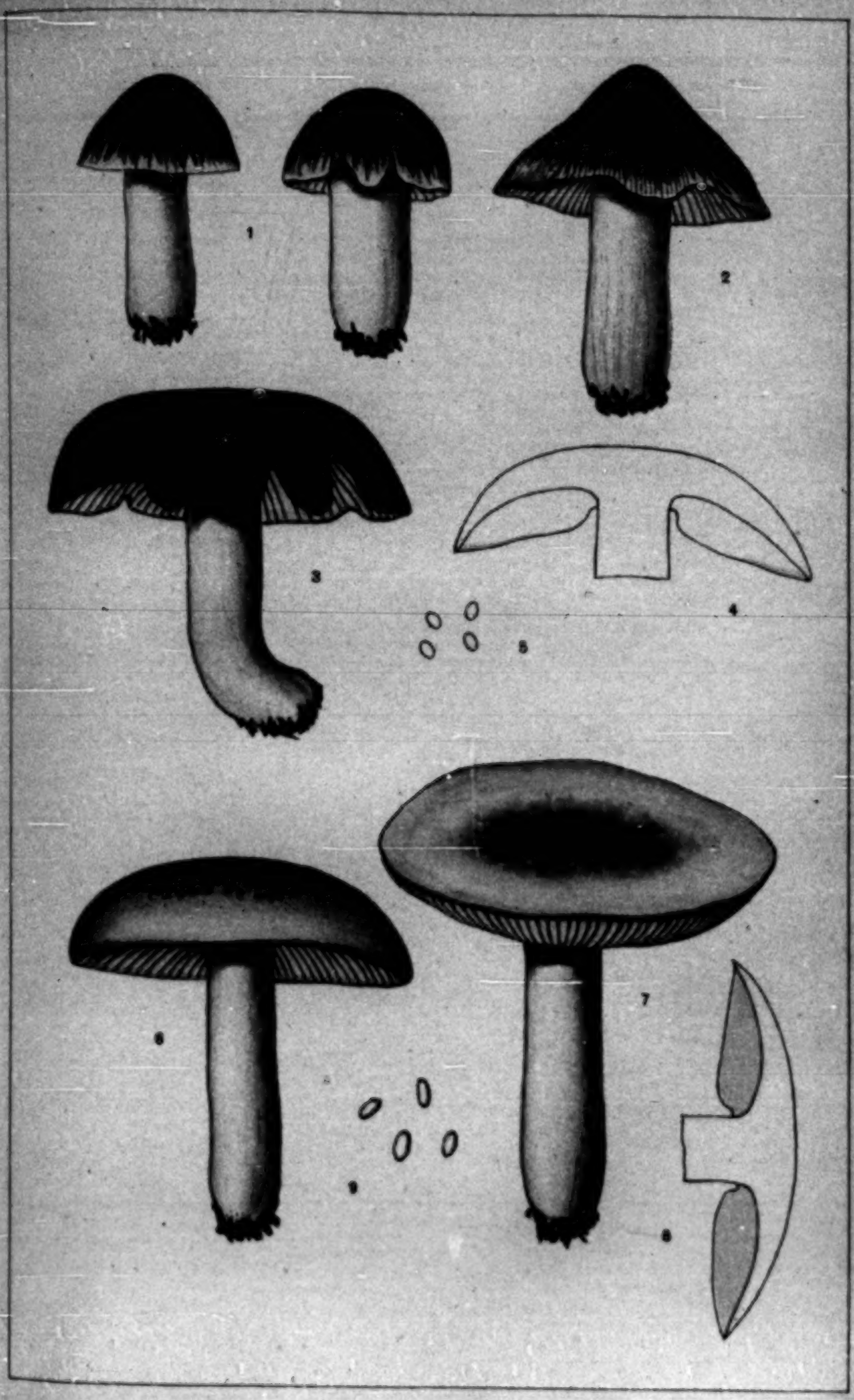


FIG. 1-5
TRICHOLOMA SUBSEJUNCTUM PK.
SUBDISJOINED TRICHOLOMA

FIG. 6-9
TRICHOLOMA EQUESTRE ALBIPES PK
WHITE STEM EQUESTRIAN TRICHOLOMA

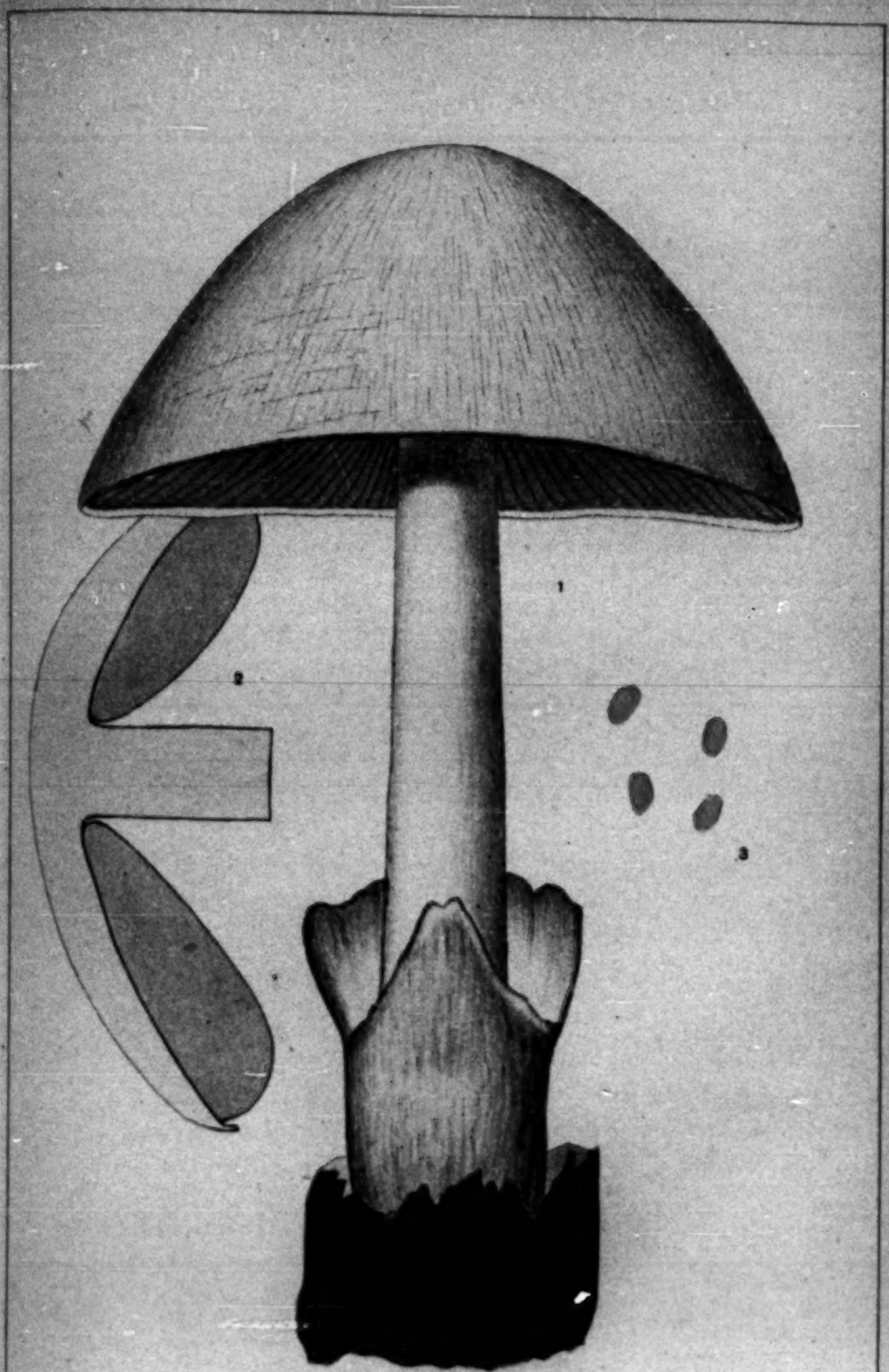
Plate 125

Volvaria bombycina (Pers.) Fr.

SILKY VOLVARIA

1 Plant of medium size with white cap
2 Vertical section of the upper part of a plant
3 Four spores x 400

EDIBLE FUNGI



VOLVARIA BOMBYCINA (PERS.) FR.
SILKY VOLVARIA

Plate 126

Entoloma grayanum Pk.

GRAY ENTOLOMA

1 Immature plant
2 Mature plant
3 Mature and immature plants united at the base
4 Whitish plant with broadly umbonate cap
5 Vertical section of the upper part of an immature plant
6 Vertical section of the upper part of a mature plant
7 Four spores x 400

ENTOLOMA GRAYANUM PK.
GRAY ENTOLOMA

Plate 127

Psilocybe polycephala (Paul.)

MANY CAP PSILOCYBE

1 Cluster of immature plants growing on the ground
2 Two immature plants of larger size
3 Mature moist plant growing on dead wood
4 Mature plant with center of cap free from moisture
5 Mature plant with entire cap free from moisture
6 Vertical section of the upper part of an immature plant
7 Vertical section of the upper part of a mature plant
8 Transverse section of a stem
9 Four spores x 400

Pholiota discolor Pk.

FADING PHOLIOTA

10 A mature and an immature plant united at the base
11 Mature plant after the escape of the moisture from the cap
12 Vertical section of the upper part of an immature plant
13 Vertical section of the upper part of a mature plant
14 Transverse section of a stem
15 Four spores x 400

EDIBLE FUNGI

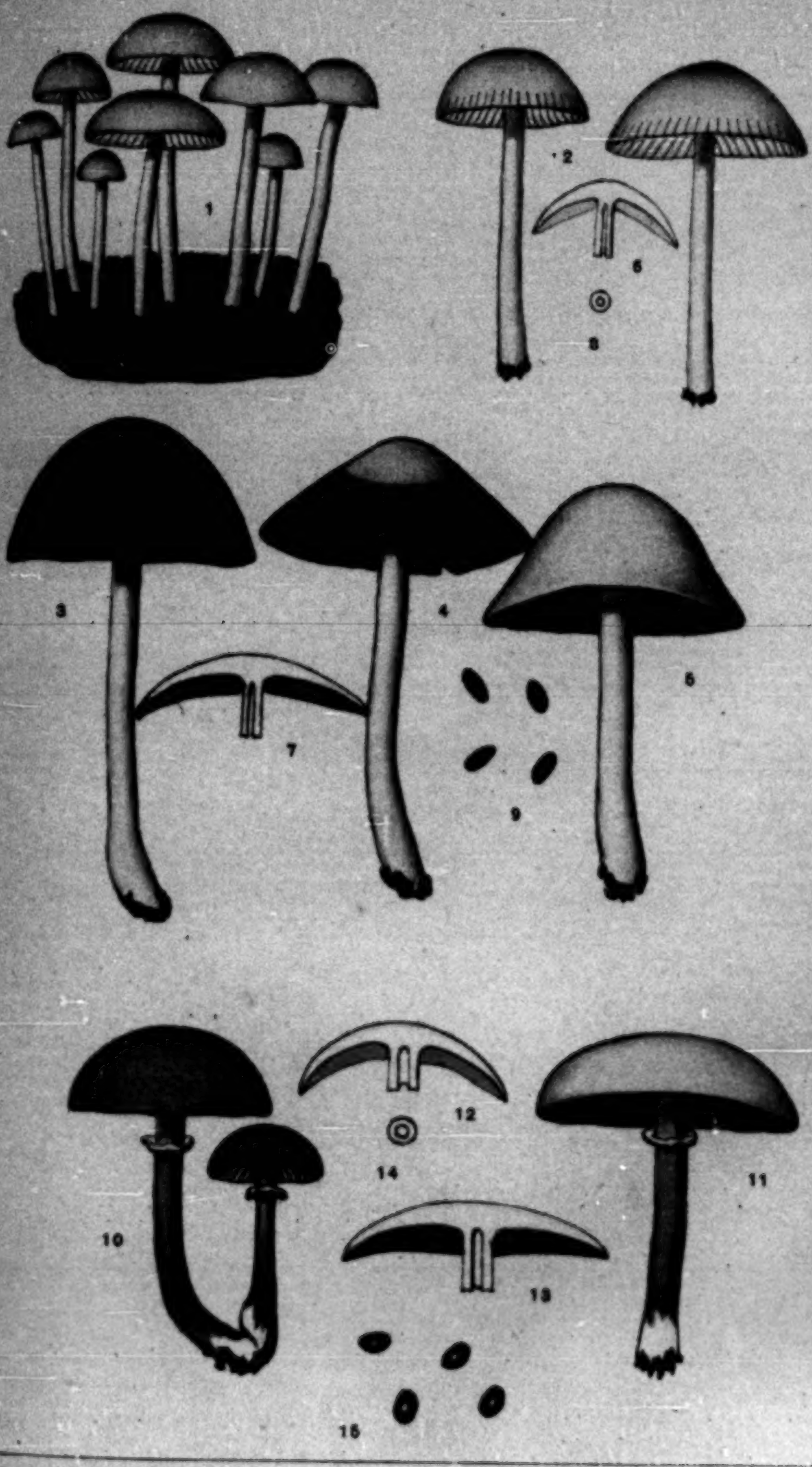
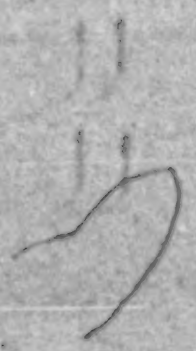


FIG. 1-9
PSILOCYBE POLYCEPHALA (PAUL.)
MANY CAP PSILOCYBE

FIG. 10-15
PHOLIOTA DISCOLOR PK.
FADING PHOLIOTA

Plate 128

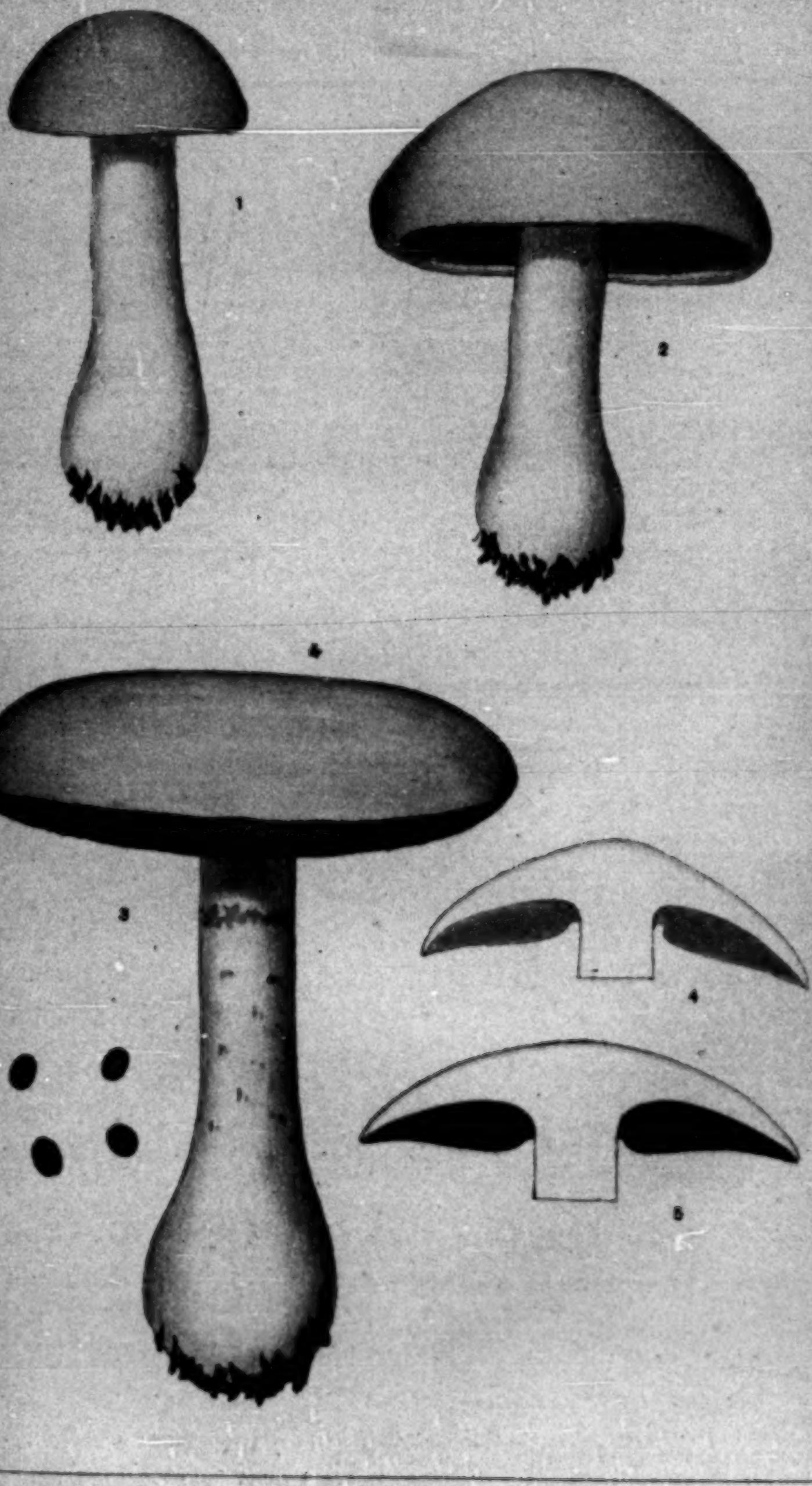


Cortinarius albidipes Pk.

WHITE STEM CORTINARIUS

1 Immature plant
2 Immature plant showing color of the gills
3 Mature plant
4 Vertical section of the upper part of an immature plant
5 Vertical section of the upper part of a mature plant
6 Four spores x 400

EDIBLE FUNGI



CORTINARIUS ALBIDIPES Pk.
WHITE STEM CORTINARIUS

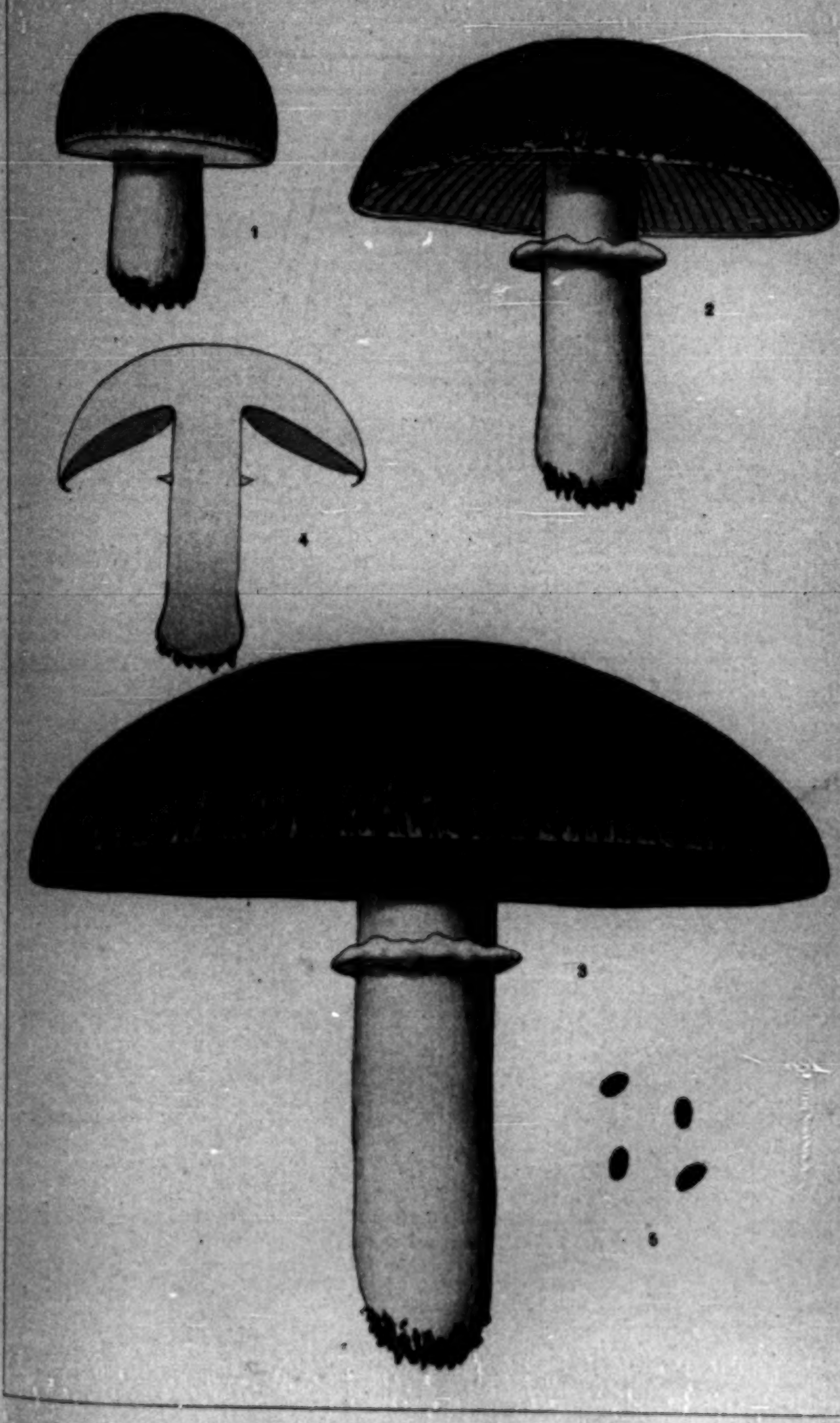
Plate 129

Agaricus campester majusculus Pk.

LARGER MUSHROOM

1 Young plant or "button" with gills concealed by the white ve
2 Immature plant showing pink color of the gills
3 Mature plant showing blackish brown color of the gills
4 Vertical section of an immature plant
5 Four spores x 400

EDIBLE FUNGI



AGARICUS CAMPESTER MAJUSCULUS Pk.

LARGER MUSHROOM

Plate 130

Boletus albidipes Pk.

WHITE STEM BOLETUS

1 Immature plant showing whitish tubes
2 Immature but older plant showing yellowish tubes
3 Mature plant with expanded cap and ochraceous tubes
4 Vertical section of the upper part of a plant
5 Four spores x 400

BOLETUS ALBIDIPES Pk.
WHITE STEM BOLETUS

Plate VII

Clitocybe sudorifica Pk.

SUDORIFIC CLITOCYBE

1 Immature plant with convex cap
2 Mature plant with centrally depressed cap
3 Cluster of plants
4 Mature plant with the margin of the cap lobed
5 Vertical section of the upper part of a plant
6 Four spores x 400

Flammula sulphurea Pk.

SULFUR-COLORED FLAMMULA

7 Immature plant
8 Tuft of plants, two of them showing the color of the mature gills
9 Vertical section of the upper part of an immature plant
10 Vertical section of the upper part of a mature plant
11 Four spores x 400

FUNGI

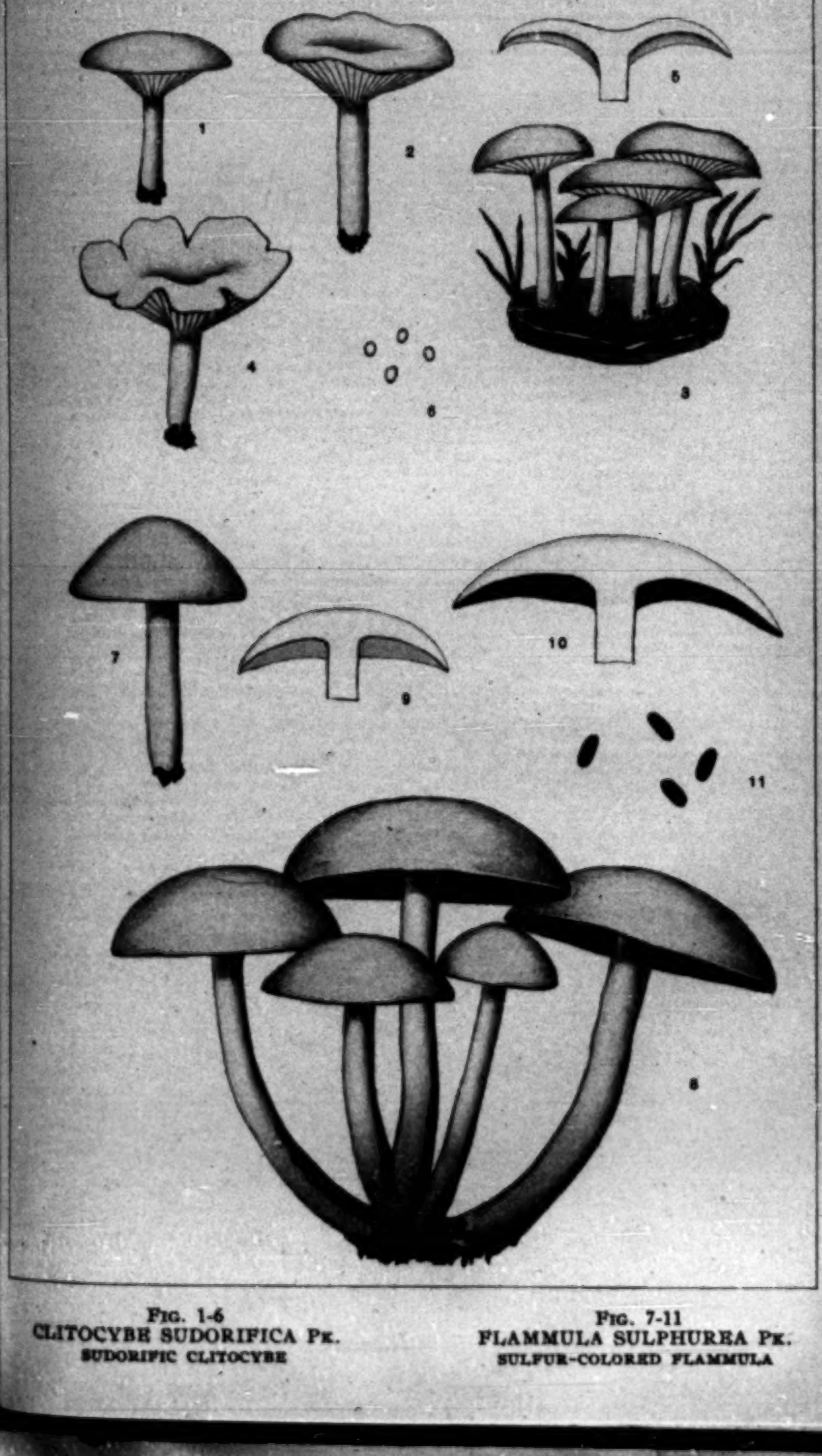


FIG. 1-6
CLITOCYBE SUDORIFICA PK.
SUDORIFIC CLITOCYBE

FIG. 7-11
FLAMMULA SULPHUREA PK.
SULFUR-COLORED FLAMMULA

IMPERIAL BUREAU OF MYCOLOGY

Plate VIII

Boletus ballouii Pk.

BALLOU BOLETUS

1 Immature plant
2 Mature plant
3 Tuft of plants, two of them showing faded color
3a Vertical section of the upper part of a plant
4 Cystidium x 400
5 Four spores x 400

BOLETUS BALLOUII PK.
BALLOU BOLETUS

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